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SECOND LANGUAGE ACQUISITION OF TOPIC-COMMENT STRUCTURES IN MANDARIN CHINESE

BY

WENDAN LI ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled SECOND LANGUAGE ACQUISITION OF TOPIC-COMMENT STRUCTURES IN MANDARIN CHINESE submitted by WENDAN LI in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in PSYCHOLINGUISTICS.

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IN MEMORY OF MY PARENTS

ABSTRACT

SECOND LANGUAGE ACQUISITION OF
TOPIC-COMMENT STRUCTURES IN MANDARIN CHINESE

The typological difference between Chinese as a topic-prominent language and English as a subject-prominent language raises questions for the theoretical analysis of topic-comment structures (TCSs) in Chinese and the second language acquisition (SLA) of these structures:

(1) How can TCSs in Chinese be described and categorized according to their semantic and syntactic characteristics?

(2) How are these TCSs acquired by second language learners whose L1 is not topic-comment?

(3) What do the characteristics of this learning process reveal about SLA?

The theoretical analysis of the present study describes the characteristics of the TCSs in Chinese and compares them to those in English. It showes that, although topic-comment is a universal feature of language, TCSs are not a homogeneous group. Their semantic and syntactic characteristics led to a systematic categorization of TCSs in Chinese. It was hypothesized that, due to the importance of the notion of topic and the large number of TCSs used in Chinese, the acquisition of TCSs would be an important part of the acquisition of the Chinese language. Different TCSs could cause different degrees of difficulty in acquisition.

Two experiments were carried out to test this hypothesis by using learners whose L1 is English. The results show significant differences in the learners' responses to the TCS categories. The different degrees of difficulty is mainly determined by the semantic characteristics of the TCSs and the influence of the learners' L1. This provides explanations for the contradictory claims made in the earlier literature on the topic-comment stage in L2 by showing that, due to the large variety of TCSs and their different degrees of difficulty, the nonuse of certain TCSs cannot be interpreted as the nonexistence of the feature of topic-comment. The results also reveal that the use of TCSs is relatively difficult to acquire due to its involvement of both grammaticality and appropriateness. These two aspects are acquired separately by L2 learners.

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CHAPTER ONE
Introduction and Overview

Second language acquisition (SLA) is a complex process involving many interrelated factors. It is also a difficult task especially when the mother tongue of a learner is typologically different from the language being learned.

Chinese and English are two languages that differ typologically. One important syntactic difference between the two concerns the use of topic-comment structures (TCSs). It has been observed that sentence organization in Chinese is more discourse-oriented in that the pragmatic consideration of setting up a topic and then providing comment on the topic is always of primary concern. English sentences, on the other hand, are organized more according to its rigorous syntactic rules, with very limited use of TCSs. Such differences in syntactic organization are a possible source of considerable difficulty in second language acquisition. Chinese speakers may find English syntactic rules hard to learn; English speakers may have difficulty in acquiring TCSs in Chinese. However, in the field of SLA, very little study has been done to characterize the process of learning typologically different languages and to examine how learners overcome these difficulties.

The study reported in this dissertation is an empirical investigation of the acquisition of TCSs in Mandarin Chinese by speakers whose mother tongue is English. TCSs refer to sentences such as the italicized part of the English example in (1.1):

(1.1) California is boring. But *San Diego, I love.*

In this example, the TCS is composed of a noun phrase, *San Diego,* which is the topic, and the rest of the sentence, *I love,* which is the comment. As any speakers of English can see, this sentence does not have the usual SVO word order of English, such as *I love San Diego.* In the TCS in (1.1), if we

ignore the conjunction *but*, *San Diego* occurs at the beginning of the second sentence for the purpose of discourse organization. However, in comprehension, *San Diego* is understood as the patient of the action. Structurally, it is associated with the usual position for an object, i.e., the position after the verb. As we can see in (1.1), TCSs such as this occur within particular discourse contexts.

In typological analysis, it has been observed that TCSs are used differently in the syntactic systems of different languages. A comparison of English and Chinese shows that, in English, most sentences are organized in the order of a subject NP followed by a VP, with TCSs having a relatively marginal status. In Chinese, however, TCSs play a central role in sentence organization and cannot be treated as a peripheral phenomenon. Such an observation has led to the claim that, although Chinese and English are both SVO languages, English is a subject-prominent language while Chinese is a topic-prominent language (Li & Thompson, 1976). It has also been claimed that topic, as a discourse notion in general, has important functions in the sentence structure of the Chinese language.

Due to this characteristic, it is expected that the acquisition of TCSs is very important and central to the acquisition of Chinese sentence structure, just as tones are absolutely crucial to the acquisition of the phonological system of the language (Lu, 1993; White, 1980, 1981). This would be especially true for learners whose first language (L1) licenses only a peripheral status to TCSs (e.g. English). However, even though the importance of TCSs in Chinese has been well-recognized in theoretical analyses, the acquisition of these structures by learners of Chinese has rarely been investigated. The present study is therefore designed to examine this learning process. It investigates not only the acquisition of the structural characteristics of Chinese TCSs, but also the acquisition of how the structures are used in appropriate discourse contexts.

The characteristics of TCSs are central to this study. In Chapter Two, therefore, a review of the literature on TCSs will be provided. First, a straightforward description of TCSs will be laid out for both English and

Chinese. It will be demonstrated that even though English and Chinese are both SVO languages, the sentence structures of these two languages are fundamentally different. While English sentences have two major constituents, NP and VP, Chinese sentences are made up of topic and comment. Analyzing Chinese sentences without using the notion of "topic" is problematic. In order to identify topic in a straightforward fashion and to distinguish topic from subject, definitions and properties of topic will then be presented in contrast to those of subject.

Once the notion of topic is well established, the discussion will proceed to the typological differences between Chinese as a topic-prominent language and English as a subject-prominent language. It will be demonstrated that the differences can be observed not only in how the notions of topic and subject are utilized, but also in a large variety of TCSs that occur in Chinese, but not in English. A third difference concerns the grammatical characterization of TCSs, that is, even though both Chinese and English have TCSs, the TCSs in the two languages are fundamentally different in nature. Whereas a movement analysis can be applied to TCSs in English, a non-movement analysis can better characterize the TCSs in Chinese.

When acquiring TCSs, the learners have to learn not only the grammatical characteristics of TCSs, but also how these structures are put to use in appropriate discourse contexts. Thus, after the characteristics of TCSs have been discussed, a functional description will be laid out on the use of TCSs in discourse. It will be seen that although topics have similar discourse functions in Chinese and English, the contextual requirements for the use of TCSs are different in the two languages. Since Chinese uses more TCSs than English, the same context may trigger the use of a TCS in Chinese, but not in English. The choice of TCSs also affects comprehension. In the last section in Chapter Two, θ-role assignments in TCSs will be discussed.

Thus, the analysis in Chapter Two will focus on the characteristics of TCSs and demonstrate some fundamental differences between Chinese and

English. It will also provide a view on the cooperation between the level of discourse organization and the level of syntax and how the choice of sentence topics, as the result of speaker intention and discourse context, influences the organization of sentences.

Since the present study concerns the acquisition of TCSs in a second language, it also deals with issues of second language acquisition in general. In Chapter Three, some important issues in second language acquisition research that are related to the present study will be discussed. Several points will be made. First, in the field of SLA, a question concerning the characteristics of L1 and L2 acquisition has been asked, i.e., whether L2 acquisition is very similar or totally different from L1 acquisition. I will argue that, due to the nature of L2 acquisition and the factors involved, L2 knowledge is both quantitatively and qualitatively different from L1 knowledge. For the acquisition of TCSs in Chinese, since L1 is (a) the first language ever learned and (b) always learned in natural setting with input full of TCSs, the structure of Chinese L1 may, from the very beginning, be perceived as having a topic followed by comment. Thus, TCSs are always learned unconsciously without difficulty. In L2 acquisition, however, the use of TCSs, especially those not occurring in L1 or those used differently in L1, must be acquired overtly. Very often, this involves both explicit instruction and repeated error correction of TCS errors.

The second point I will make in Chapter Three concerns experimental methodology. I will refer to different research observations and demonstrate that, since there is a distinction between linguistic competence and linguistic performance, studies in SLA that attempt to determine L2 competence by observing L2 performance always have to face the problem of confounding variables. Among the different factors affecting L2 acquisition, I choose to examine the influence of learners' L1, i.e., the factor that has been claimed to be the most important factor in L2 acquisition. I will refer to previous literature and research findings to show that L1 influence can be positive or negative. It may also interact with other factors in complex ways.

In my review of literature on language development, I found different claims on the use of TCSs in language acquisition. Since this is closely related to the present study, I will present a review of the studies conducted and the claims made. It is hoped that the present study is able to provide an explanation for the different research findings reported in the earlier literature.

The fact that Chinese and English have fundamental differences, as illustrated in Chapter Two, has possible psycholinguistic implications. One prediction that will fall out from the analysis is that, since TCSs are relatively unimportant in the sentence organization in English, speakers of English speakers may have difficulty in acquiring TCSs in Chinese. Due to the large variety of TCSs in Chinese which differ in their semantic and syntactic characteristics, some will be easier than others to learn and will, therefore, be acquired earlier than those that are more difficult.

These predictions and assumptions lead to the empirical core of the present study. The main objectives were to find out whether TCSs cause different degrees of difficulties in L2 acquisition and whether the order of acquisition is related to the semantic characteristics or the syntactic characteristics of TCSs. To achieve these objectives, two experiments were carried out to examine the acquisition of Chinese TCSs by English speakers. They were designed to observe (a) the different degrees of learning difficulties caused by the different TCS categories, (b) the differences in the performance of the learners at different proficiency levels, and (c) the relation between the acquisition of the structural characteristics of the TCS categories and the acquisition of the use of these categories in appropriate discourse contexts.

The general design of the study will be described in Chapter Four. In this chapter, I will first specify the scope of the study and the research questions the study aims to answer. Then, the TCSs investigated by the present study will be classified into 11 categories. Based on a detailed

analysis of the semantic and syntactic differences among the 11 categories, the experimental hypotheses will then be presented.

In Chapter Five, I will report on Experiment 1 which employed a judgment task to explore the acquisition of TCSs by L2 Chinese learners. I will first provide a detailed description of the task with examples of the stimuli, the procedure of data elicitation and the design considerations. Then, the results will be presented followed by a discussion of related issues. Chapter Six, which reports on Experiment 2 which employed a translation task, will be in a similar format. Chapter Seven will relate the results of the study to more general discussion on issues such as the analysis of TCSs, experimental methodology and Chinese pedagogy. The conclusion and the implications of the study will be presented in Chapter Eight.

In this dissertation, I will follow the convention of using the cover term "Chinese" to refer to "Mandarin Chinese". Both the examples for the analysis of Chinese TCSs and the stimuli for the experiments will be in Mandarin.

CHAPTER TWO
Analysis of TCSs

2.0. Introduction

The analyses of topic and its related structures and processes such as TCSs, topicalization, empty categories and topic chain have been frequently discussed in linguistic analysis, especially in the analysis of Chinese.

In this chapter, I focus on the nature of TCSs by drawing from the strengths of different lines of research and by characterizing TCSs from a variety of perspectives. First of all, I will describe the use of TCSs in both English and Chinese and the differences between them. I will point out specifically that analyzing sentences using the notion of NP and VP is feasible for English, but produces serious problems for Chinese. This is due to the fact that sentence structure and discourse organization are totally different in the two languages. In the analysis of Chinese, the notion of topic is indispensable.

After establishing the importance of the notion of topic for the analysis of Chinese, I will present an analysis of the definitions and the properties of topic which distinguishes topic from subject. I will also follow Li & Thompson (1981) in describing Chinese as a topic-prominent language and English as a subject-prominent language. The topic-prominence of Chinese will also be illustrated by a large variety of TCSs used in the language. For the characteristics of TCSs, I will present a structural analysis of their grammatical properties, an analysis of their functions in discourse and an analysis of θ-role assignment.

2.1. The Phenomena

TCSs in this study refer to sentences with two major parts: **topic**, which occurs at the beginning of a sentence and designates what the sentence is about[1]; and **comment**, which is the rest of the sentence and indicates what is said about the topic. Exemplified below are some English examples, in which the topics are underlined and the subject of each sentence is italicized. The blanks in these examples will be used for further explanation:

(2.1) *I* like John.
(2.2) John, *I* like _____ .
(2.3) On Tuesday, *I* met Mary _____ .
(2.4) Under the table *Bill* noticed a small iron box _____ .

These examples indicate that topics can be designated by different grammatical categories, e.g., NPs in (2.1) and (2.2) and PPs in (2.3) and (2.4)[2]. Topics can also have different semantic content, e.g., an agent in (2.1), a patient in (2.2), a time expression in (2.3) and a locative in (2.4). These examples also show that a particular event can be predicated in different ways by choosing different elements as topics. The different choices of topics result in different surface word orders.

It should be noted that I have thus far only briefly touched on the syntactic and semantic characteristics of TCSs. These characteristics, are very important for the empirical design of the present study. They will be

---

1 "Topic" can also refer to discourse topics or topics at clause level. In Chinese, the difference between a clause and a sentence is not clearly defined. Since the present study is mainly on sentence topics and the related simple sentence structures, the term "topic" used in this study refers to sentence topics unless otherwise specified.

For an analysis of multi-level topic-comment structures on both sentence and clause levels, please refer to Tsao (1990) and Hu (1991).

2 Topics can also be expressed by other grammatical categories, e.g., VP, AdjP or even S and S' (Xu & Langendoen, 1985).

Among the examples given in (2.1)-(2.4), (2.2) and (2.3) are from (Brunson, 1992, p. 178), (2.4) is from Rochemont (1989, p. 145).

further discussed and exemplified in Chapter Four where the empirical design is laid out.

2.1.1. English Sentence Structure and TCSs

In the field of linguistics, there is a general recognition that languages vary considerably in the extent to which surface word order is controlled by syntactic or pragmatic/discourse considerations (Dryer, 1989; Givón, 1987, 1992; Payne, 1992; Sun & Givón, 1985; Thompson, 1978). In some languages, word order is determined primarily by the syntactic functions of the constituents. English, for example, is one of such languages in which subject is required for a sentence in preverbal position. English sentences are therefore analyzed as having two major constituents, NP (subject) and VP. Compared to the notion of subject, topic is not as essential in the construction of English sentences.

Referring to the above examples, (2.1) has the basic canonical word order of English, i.e. a subject NP followed by a VP. If the same sentence is analyzed in terms of topic and comment, the topic would be identical to the subject. Examples (2.2)-(2.4), however, are different from (2.1) in that each sentence has a topic that is distinct from the subject. Moreover, all these topics can be seen as being derived by moving the underlined parts from the position of the blanks to the sentence-initial position. Thus, TCSs in English such as (2.2)-(2.4) are analyzed as derived structures by a process called "topicalization" (Chomsky, 1965, 1981; Drubig, 1992; Lasnik & Uriagereka, 1988; Rochemont, 1989).

2.1.2. Chinese Sentence Structure

While English sentences are always composed of an NP and a VP, Chinese sentences seem to be quite different. In the history of Chinese linguistics, a great deal of effort has been made to analyze Chinese sentences by using immediate constituents NP and VP (or, in more

traditional terms, "subject" and "predicate") without much success. One of the central issues under debate has been the identification of subject, for which opposing positions are taken[3].

One approach, called the "meaning approach", argued that, since the word order of Chinese is variable (as can be seen from the following examples), the identification of subjects cannot be based on the positions of the words in sentences. Instead, subjects must be identified using the semantic information in the predication, i.e., subject is defined as the agent (or theme) of the event or predication (Lü, 1949; Wang, 1956). According to this approach, *wo* 'I' in (2.5) below, *ke* 'visitor' in both (2.6a) and (2.6b), and *yige xuesheng* 'a student' in (2.7) are all subjects of the respective sentences (italicized):

(2.5) Ji *wo* chi.
chicken I eat
Chicken I eat.

(2.6) a. *Ke* lai le[4].
visitor come PRT
The visitor has come.

b. Lai *ke* le.
come visitor PRT
A visitor is here.

(2.7) Jiaoshi li zuo zhe *yige xuesheng*.[5]
classroom in sit PROG one student
A student is sitting in the classroom.

---

[3] Regarding the assignment of subject, more information and discussion will be presented in section 2.2 in addition to the approaches discussed here.

[4] In the Chinese examples here and after, *PRT* and *PROG* indicate particles for aspect.

[5] For simplicity, the numerals and classifiers within an NP are always put together. In this sentence, *yi* is the numeral; *ge* is the classifier. But the English gloss would always be a numeral without indicating the classifier.

The other approach, called the "position approach", retorted that there are no convincing arguments for analyzing the preverbal *ji* 'chicken' in (2.5) as an object. By the same token, *yige xuesheng* 'one student' in (2.7) should not be analyzed as subject. Furthermore, *ke* 'visitor' in (2.6a) and *ke* 'visitor' in (2.6b) have to be different. Their contention was that subject and object are structural notions which should account for the positions of words in sentences and be identified thereby. Since Chinese is an SVO language, all preverbal NPs should be subjects and all postverbal NPs should be objects (Chao, 1968). According to this approach, (2.5)-(2.7) should be analyzed differently as in (2.8)-(2.10):

(2.8) *Ji* *wo* chi.
chicken I eat
Chicken I eat.

(2.9) a. *Ke* lai le.
visitor come PRT
The visitor has come.

b. Lai ke le.
come visitor PRT
A visitor is here.

(2.10) *Jiaoshi* *li* zuo zhe yige xuesheng.
classroom in sit PROG one student
A student is sitting in the classroom.

Comparing the two different analyses, one can see that the two approaches agree only when there is only one preverbal NP and this NP is also the agent (or the theme) of the event or predication, as in (2.6a) and (2.9a). When this does not happen, their analyses diverge. In (2.8), both *ji* 'chicken' and *wo* 'I' are analyzed as subjects; *ke* 'visitor' in (2.9a) is a subject, but *ke* 'visitor' in (2.9b) is an object; in (2.10), *jiaoshi li* 'in the classroom' is the subject while *yige xuesheng* 'a student' is the object, even though the verb *zuo* 'sit' is intransitive.

In addition to the discrepancies illustrated so far, the above two approaches both encountered another problem in the identification of subject. This problem is illustrated by the sentence in (2.11):

(2.11) Ta tou teng.
he head ache
He is having a headache.

For sentences like (2.11), both the "meaning approach" and the "position approach" had to analyze them as having "double subjects", i.e., *ta* 'he' as the "major subject" which takes *tou teng* 'head aches' as a sentential predicate. Within the sentential predicate, *tou* 'head' is the "minor subject" and *teng* 'ache', a predicate. Some grammarians took the approach of Transformational-generative Grammar (e.g., Teng, (1974)) and analyzed sentences such as (2.11) in the following fashion:

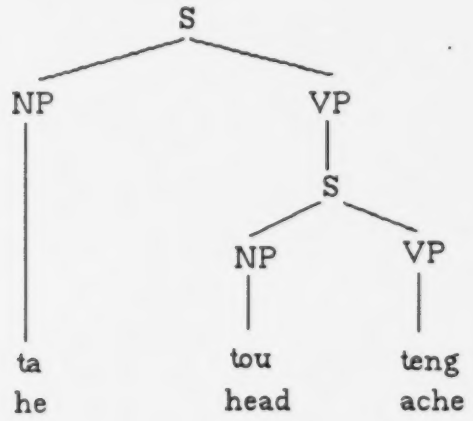

Figure 2.1: "Double Nominative Construction" in Chinese

However, this analysis still did not distinguish topic from subject. The important characteristic of the first NP (*ta* 'he'), i.e., it can also serve as the topic of the discourse (as I will discuss shortly), was not captured (Tsao, 1990).

A third problem for the analysis of Chinese exclusively in terms of NP (subject) and VP is that neither the "meaning" approach nor the "position" approach can account for the structural ambiguity in (2.12):

(2.12) Ji chi.
chicken eat
Meaning 1: Chicken (I) eat.
Meaning 2: The chicken is eating.

The difficulties in and the debates on analyzing Chinese sentences in terms of subject and predicate made Chinese linguists realize that much of the difficulty in the identification of subject and object comes from the fact that the structure of Chinese is fundamentally different from the structure of languages such as English. Chinese does not have inflectional marking, nor does it have agreement between subject and verb to assist in identification. Comparing longer pieces of discourse in Chinese and their counterparts in English, another difference emerges; that is, even though both Chinese and English are claimed to have basic SVO word order, sentences in these two languages are organized in totally different fashions.

To demonstrate this point, let's first look at some individual simple sentences in both Chinese and English in (2.13). Then, these sentences will be put together to form longer stretches of discourse.

(2.13) a. Wo qing John dao wo jia lai le,
I invite John to I home come PRT,
I invited John to come to my home.

Wo mei gaosu ta lai gan shenme,
I didn't tell he come do what,
I didn't tell him why to come.

Wo deng ta lai le zai gaosu ta.
I wait he come PRT then tell he
I'll tell him when he arrives.

(2.13) b. Zhedong fangzi, chufang tai xiao.
this house, kitchen too small.
The kitchen in this house is too small.

Zhedong fangzi, keting tai an.
this house living-room too dark
The living-room in this house is too dark.

Zhedong fangzi, qiang-shang de qi dou tuoluo le,
this house wall on MOD[6] paint all fall off PRT,
The paint on the walls in this house is falling off.

Zhedong fangzi, diqu ye bu hao,
this house location also not good,
The location of this house is also not good.

Zhedong fangzi, wo bu xihuan.
this house I not like.
This house, I don't like.

In (2.14) below, individual sentences in (2.13) are put together in the way they usually occur in natural discourse. (2.14a) corresponds to (2.13a); (2.14b) corresponds to (2.13b).

(2.14) a. Wo qing John dao wo jia lai le, mei gaosu ta lai gan
I invite John to I home come PRT, didn't tell he come do

shenme, deng ta lai le zai gaosu ta.
what, wait he come PRT then tell he

I invited John to my home. But I didn't tell him why to come.
I'll tell him when he arrives.

(2.14) b. Zhedong fangzi, chufang tai xiao, keting tai an,
this house, kitchen too small, living-room too dark,

qiang-shang de qi dou tuoluo le, diqu ye bu hao,
wall on MOD paint all fall off PRT, location also not good,

wo bu xihuan.
I not like.

---

[6] 'MOD' indicates modifying particles such as *de, di, zhi*, etc.. They close up a unit (a phrase or a relative clause) that modifies the following noun.

In this house, the kitchen is too small. The living-room is too dark. The paint on thewalls is falling off. The location is also not good. I don't like this house.

(2.15) is extracted from a written Chinese discourse:

(2.15) Tong Shaoshan de laopo jiao Heying, bing bu sha, po de hen,
Tong Shaoshan MOD wife call Heying, not stupid, aggressive very,

suyou xiao lajiao zhi cheng, ting wan le zhihou xiang bei
have small pepper MOD name, listen finish PRT after like by

hufeng ding le side, "wa" di yisheng jiao qilai, ku qilai, you ku
wasps sting PRT like, MOD sound scream up, cry up, again cry

you jiao di xiang shiyanshi ben qu (Lu, 1981).
again scream MOD toward laboratory run go.

Tong Shaoshan's wife is called Heying. Known as a "small pepper', she is quite sharp and very aggressive. After listening to what was said, she screamed as if she was stung by some wasps, and then, ran towards the lab, crying and shouting.

A comparison of the individual simple sentences in Chinese and English in (2.13) reveals some of the syntactic differences between these two languages. However, these differences are not as conspicuous as in (2.14) and (2.15). Longer discourse passages in (2.14) and (2.15) show that, in the construction of English discourse, sentences are strung together without much change in sentence-internal structure. The syntactic organization of sentences is generally retained; each sentence conforms to sentence-internal grammatical rules and has clear boundaries. The syntactic level and the level of discourse can be easily distinguished by the fact that a piece of discourse is composed of a number of sentences.

Chinese, however, is different. When simple sentences with common topics are combined to form a longer stretch of discourse, they are not simply put together as in English. Instead, the common topic only occurs once at the beginning. Repetitions of the same topic are deleted by

rules such as topic coindexing and topic deletion (Tsao, 1990). The result is a "topic chain", i.e., a complex sentence with only one topic, but several comments juxtaposed one after another without coordination. "Topic chains" are very common in Chinese and have distinctive syntactic properties. It has even been argued that a topic chain should be considered as "a basic unit in Chinese syntax" with the function of an S' (Shi, 1989).

Comparing the English and Chinese sentences in (2.14) and (2.15), one may also notice that, in English, every clause has only one finite verb, which is the centre of the sentence or clause and determines the form of other non-finite verbs. Chinese sentences, however, may contain an unlimited number of comments[7], each forming a new stage in describing or providing information about the topic. For this reason, it has been claimed that Chinese sentences are multi-focused. They have larger capacity than English sentences, such that speakers can keep adding more content to a sentence in the form of comment. In this sense, Chinese sentences "flow" with the speakers' stream of thinking. Principles for the arrangement of comments do exist, but they are mostly principles of cognitive style or logic rather than grammatical rules, e.g., cause before effect, reasoning before conclusion, from more general to more specific, arranging events according to their chronological order and so on. (Hu & Jin, 1989; Shen, 1988, 1994).

Such sentence organization in Chinese has an inevitable consequence, i.e., there is no clear distinction between a sentence and a piece of discourse in terms of internal structure. For example, (2.14) and (2.15) are sentences. Yet each of them is a piece of discourse in content. This characteristic is reflected in Tsao when he gives a definition to a "topic chain":

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[7] Of course, this is only so in theory. In reality, the number of comments is also subject to psychological constraints such as memory limitation.

> We have also found that a sentence in Chinese can be roughly defined as a topic chain, which is a stretch of discourse composed of one or more comment clauses sharing a common topic, which heads the chain (1990, p. 63).

Adding to this picture, sentence topics in Chinese often serve as discourse topics. The rules of topic coindexing and topic deletion also apply across sentences, resulting in the fact that "topic chains" are also an important discourse phenomenon in Chinese (Tsao, 1979). All these amount to saying that Chinese sentences are organized in a fashion more similar to discourse organization, with topics serving as the bridge between the two levels.

As evidence for this claim, Tsao (1990) reported the results of a very interesting experiment. The experiment used 18 ESL students in an English composition class at the National Taiwan Normal University as subjects to punctuate two paragraphs of Chinese and English written work. The following results in Table 2.1 were obtained:

Table 2.1: Punctuation of Chinese and English Passages (Tsao, 1990)

	Chinese		English	
# of sentences in the original passage	1	2	6	5
Students' average number of sentences	2.53	3.82	5.49	4.94
Range	1-4	2-5	4-6	3-6
# of students who agree with the original	1	1	8	6

These results show that, while the subjects are all native speakers of Chinese, they disagree considerably among themselves as well as with the original authors as to how many sentences there are in the Chinese paragraphs. At the same time, while they are far from having a native command of English, their performance displays considerably more agreement among themselves and with the original authors. This indicates that, since Chinese sentence structure is very similar to discourse structure, punctuation could be a subjective matter. In English, on the

other hand, every sentence is structurally determined. There could not be much variation in punctuation.

Due to the prominent use of topic in Chinese, it has been estimated that at least 50% of Chinese sentences have to be analyzed by using the notion of topic (Chao, 1968). Xie (1992) reports on a survey conducted on the oral narration of Chinese and English native speakers. He claims that there is a statistically significant difference in the narratives in Chinese and English in terms of using of topic-prominent features[8] (p. 69). Such observations have provided grounds for the well-established and widely-accepted claim that Chinese is a "more discourse-oriented" language (Huang, 1984; Tsao, 1979, 1990).

Based on the topic-prominent characteristics of Chinese revealed by different lines of research, Tsao (1979) commented that "Indo-European-based grammatical models, when they are applied to the study of Chinese syntax, have all enjoyed various degrees of success. Nevertheless, it has long been felt that certain grammatical phenomena in Chinese do not fit snugly into any of these models" (p. 2). In a more recent monograph (1990), he made the much stronger assertion that "unless this discourse nature of topic is appreciated, it is difficult to distinguish it from subject, and unless topic is properly differentiated from subject, one of the basic problems in the study of Chinese grammar will be difficult, if not impossible, to treat" (p. 11).

2.1.3. The Notion of Topic in the Analysis of Chinese

The breakthrough in the analysis of Chinese by using topic as a syntactic notion was first made by Li & Thompson (1976)[9]. This notion has since been used, modified and developed in later analysis. It has also

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[8] Topic-prominent features and the use of TCSs in Chinese will be further discussed later in this chapter.

[9] Actually, Chao (1968, p. 69) was the first to make the observation that "the grammatical meaning of subject and predicate in Chinese is topic and comment, rather than actor and action". However, he did not go further to distinguish topic from subject.

inspired a great deal of research in Chinese linguistics (e.g., Hu, 1991; Huang, 1987; Jin, 1989; Li, 1990; Li & Thompson, 1981; Shi, 1989; Tsao, 1979, 1987, 1990; Xie, 1992; Xu & Langendoen, 1985; Xu, 1986; Zubin & Li, 1986). Since the present study uses this notion in the analysis of Chinese TCSs, I will, in this section, present key elements of this line of research by using examples from different sources.

The most innovative point made by Li & Thompson (1976) is that Chinese sentence structure is fundamentally different from that of English. In Chinese, the notion of topic plays a major role, such that Chinese sentences can be better described as having two parts, topic and comment. The notion of subject is not as important in the construction of Chinese sentences as it is in English. Many Chinese sentences do not even have a subject. According to Li & Thompson's (1976, 1981) analysis, (2.5)-(2.7) would be reanalyzed as (2.16)-(2.18) below (again, using the convention of underlining topics and italicizing subjects). (2.19) is an example for sentences without a subject:

(2.16) Ji *wo* chi.
chicken I eat
Chicken I eat.

(2.17) a. *Ke* lai le.
visitor come PRT
The visitor has come.

b. Lai *ke* le.
come visitor PRT
A visitor has come.

(2.18) Jiaoshi li zuo zhe *yige* *xuesheng*.
classroom in sit PROG one student
A student is sitting in the classroom.

(2.19) Yifu xi le.
clothes wash PRT
The clothes (have been) washed.

According to Li & Thompson's analysis (1976, 1981), *Ji* 'chicken' in (2.16) is the topic of the sentence which indicates what the sentence is about; *wo chi* 'I eat' says something about the topic and, therefore, is the comment. Within the comment, *wo* 'I' is the subject[10]. In (2.17a), *ke* 'visitor' is both the topic and the subject. In (2.17b), the topic is missing, *ke* 'visitor' is the subject. In (2.18), *jiaoshi li* 'in the classroom' is the topic, *yige xuesheng* 'a student' is the subject. In (2.19), *yifu* 'clothes' is the topic; the subject is missing.

By using an extra position for topic in the analysis of Chinese, this approach also provides a solution for sentences with "double subjects" such as (2.11). According to this analysis, the first NP, e.g., *wo* 'I' in the following figure, can be analyzed as the topic and the second NP, *tou* 'head', as the subject.

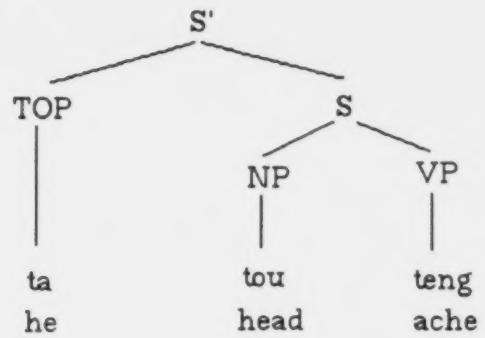

Figure 2.2: Topic-comment Analysis of "Double Nominative Construction" in Chinese

For the structural ambiguity shown in (2.12), Li & Thompson's analysis (1976) would be that *Ji* 'chicken' in Meaning 1 (i.e., 'Chicken (I) eat'), is the topic coindexed with the empty object of *chi* 'eat'[11]. In this case, both the subject position and the object position are empty. For the other

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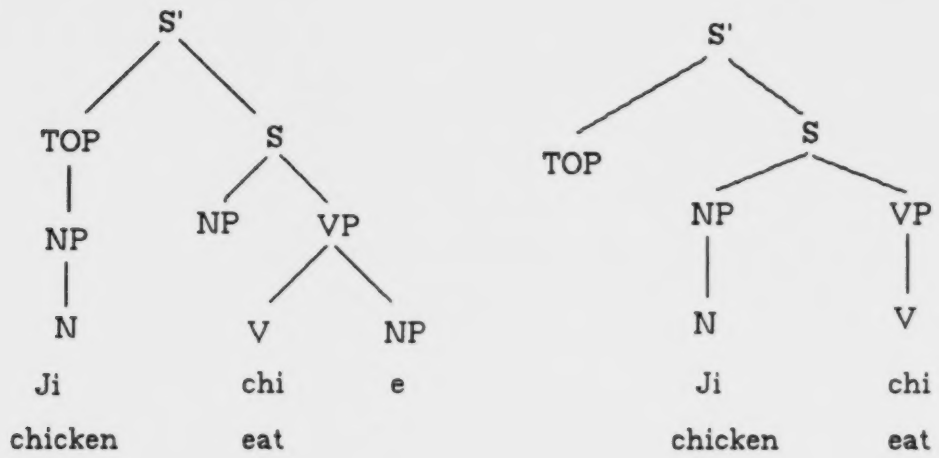
[10] The notions "topic", "comment" and "subject" will be further defined in the next section.

[11] This analysis raises the question of whether the topic is moved out of the object position which is an unsettled issue in the analysis of Chinese. See section 2.4.3. for further discussion of this point.

interpretation 'The chicken is eating', *ji* 'chicken' is the subject. The structures of these two interpretations are shown in Figure 2.3:



Chicken (I) eat. The chicken is eating.

Figure 2.3: Structural Ambiguity

Analyzing Chinese sentences by using the notion of topic not only provides a solution for the above problems, but also captures the similarity between sentence organization and discourse organization in Chinese.

Since topic is such an essential notion in the analysis of Chinese, it is definitely important to define the notion in a more explicit fashion. Due to the fact that both the notion of topic and the notion of subject are used in the analysis of Chinese, it is also important to distinguish between the two. In the next section, I will turn to a discussion of these two issues.

2.2. Definitions of Topic

The analysis of topic (or "theme") is not a new area of study in linguistics. Actually, the literature from different perspectives is quite

extensive, e.g., Chomsky (1965), Brown and Yule (1983), Danes (1987), Firbas (1987), Gundel (1977), Halliday (1967), Strawson (1964) and Vennemann (1975). However, a precise definition of topic has never been agreed upon (Tomlin, 1990). A major reason is that the functions and characteristics of topic penetrate into both discourse and syntactic domains. Syntactically, topic has structural characteristics, while functionally, it plays important roles in discourse organization. This has been shown in studies across many languages (e.g., Chomsky (1977) for English; Li & Thompson (1981), Tsao (1979, 1990) and Xu & Langendoen (1985) for Chinese; Fuller (1988) for Hmong; Fox (1985) for Tagalog; Kuno (1973, 1978) for Japanese; and Hope (1974) for Lisu). These studies have also shown that the notion of topic is used differently in different languages. consequently, the notion of topic can be, and has been, defined and characterized in different ways (Gundel, 1985; Li & Thompson, 1981; Reinhart, 1982; Xu & Langendoen, 1985). Even though none of the definitions we have so far are all-purpose and unfalsifiable, they have provided important stepping stones for later studies such as the present one.

In this and the following sections, I will try to define the notion of topic for Chinese in the way that is appropriate and sufficient for the present study. Since the notion of topic is most easy to be confused with the notion of subject, these two notions will be contrasted and defined from both a structural and a functional point of view. After that, I will proceed to discuss some major properties of topic, also in contrast to the properties of subject.

2.2.1. Structural Definition of Topic

For a structural definition of topic, I agree with the following configuration proposed by Xu & Langendoen (1985) for Chinese:

(2.20) $S' \rightarrow TOP\ S$

According to this configuration, a Chinese sentence S' is made up of two parts: topic, which is in the sentence-initial position, followed by comment, which may contain a full clause structure and is therefore designated by S.

One may notice immediately that (2.20) is not formulated by using the notions such as COMP, CP and IP (AgrP, TP and so on) which are employed in more current syntactic analyses. The reason for this is that the Chinese language does not have an inflectional system. It does not have lexical complementizers without semantic content that serve as clause introducers (such as *that* in English), nor does it have overt *wh*-movement. Since the present study is not a theoretical investigation on the syntactic analysis of TCSs, whether the nodes mentioned above should be used is not a relevant issue. Therefore, the configuration in (2.20) is considered sufficient for a description of Chinese TCSs, given the purposes of the present study.

Now, let's return to the discussion of (2.20). The canonical word order within the S is SVO (Chu, 1979; Huang, 1978; Li, 1990; Mei, 1979; Sun & Givon, 1985). When a verb is transitive with all its arguments present in the clause and a topic in sentence initial position, the basic order would be TSVO. This abbreviation will become important later when I categorize the TCSs under the present study. The following figure uses the sentence *Jintian wo chi ji* 'I eat chicken today' to illustrate the basic word order in Chinese TCSs:

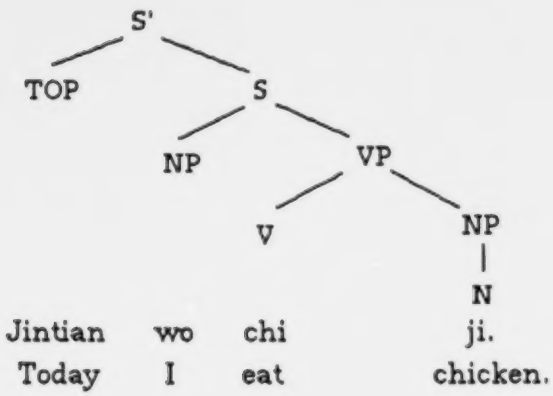


Figure 2.4: Major Constituents
in Chinese Topic-comment Sentences

Based on this configuration, I define **topic** structurally as the sister constituent of S immediately dominated by S', and **subject** as the sister node of VP immediately dominated by S, consistent with the formal approach. Therefore, the structural distinction between topic and subject is that a subject is within the S while a topic is not.

Now, before I go on, I have to digress somewhat in order to provide background information about the clause structure of Chinese and the justification of the way I specify constituents.

Up to now, SVO is the most common word order specification for Chinese. I adopt this view in this study. Actually, the clause structure as well as the identification and specification of grammatical relations for Chinese is an issue very much alive. The "meaning approach" and the "position approach" discussed earlier in section 2.1.2 are still being upheld and debated among Chinese linguists (Li, 1985; Tang, 1989). From a structural point of view, it has been proposed within the formal approach that Chinese clause structure is different from English clause structure in that subjects appear inside the VP for Chinese but outside the VP for English. This accounts for the fact that English grammar demands subject-verb agreement while Chinese does not (Wible, 1990). Among those

who are seeking other alternatives to explain Chinese grammar, LaPolla (1993, p. 760) challenges all the analyses of grammatical relations for Chinese and argues that "there has been no grammaticalization of syntactic functions in Chinese. The correct assignment of semantic roles to the constituents of a discourse is done by the listener on the basis of the discourse structure and pragmatics (information flow, inference, relevance, and real world knowledge)". Hu (1991) also analyzes Chinese sentence structures in terms of topic and comment and phrasal categories such as NP, VP and PP without using the notions of subject and object.

For the present study, I adopt Li & Thompson's (1981) approach and assume that there are "subjects" and "objects" in Chinese. In this approach, the identification of subjects and objects is based on semantic information, which I also adopt for the present study. This, however, is not because I think semantics is syntax, or vice versa, but rather because this is a clear way to represent the different sentence structures investigated in the present study. Take (2.17a) and (2.17b) given earlier as examples. The differences between the two sentences would be better characterized as the difference between the orders of SV and VS, rather than the difference between SV and VO. Also, the following two sentences in (2.21) and (2.22) should be characterized as having different constituents, TVO and TVS, rather than having the same constituents.

(2.21) Jintian shoudao liangfeng xin.
today receive two letter
Today (I) received two letters.

(2.22) Jintian lai le *liangge ren.*
today come PRT two people
Today two people came.

To English-speaking learners of Chinese, (2.22) would be very similar to English sentences such as "Here comes the bus" in which *the bus* is interpreted as the subject. Due to this similarity, it would be expected that when learners encounter (2.22) in Chinese, they would treat *liangge ren* 'two people' as the subject and react to this sentence differently from (2.21). Therefore, these two sentences are considered to be different.

2.2.2. Functional Definition of Topic

Since the structural definitions only elucidate a nature of topic and subject that is rather "abstract", I would like to supplement them with functional definitions provided by Li & Thompson (1981). According to their definitions, a **topic** is "typically a noun phrase (or a verb phrase) that names what the sentence is about, is definite or generic, occurs in sentence-initial position, and may be followed by a pause or a pause particle"[12]. A **subject** is "the noun phrase that has a 'doing' or 'being' relationship with the verb in that sentence". Li & Thompson's analysis (1976, 1981) has been illustrated before in (2.16)-(2.19). In practice, the structural definitions and Li & Thompson's functional definitions do not produce contradictory results.

2.3. Properties of Topic

Now that the notions of topic and subject have been defined, I will go on to discuss some major properties of topic and subject. I should point out here before I start that the syntactic characteristics of topic and the relation between a topic and its related element in the comment will be the focus of the next section. Here, I am going to examine mainly the semantic properties of topic in contrast to those of subject. My discussion in this section will be organized and carried out mainly in functional terms.

2.3.1. Selectional Restrictions

The first property that distinguishes a topic from a subject is that the relationship between a subject and a verb in a sentence is constrained by what Li & Thompson (1976) call "selectional restrictions". A subject is the

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12 Pause particles are meaningless syllables such as *a* or *ya* that are optionally used after a topic before a pause. Since neither the pause nor the pause particles are obligatory, they cannot be used as criteria to identify topics.

external argument of the verb and is selected by the verb. In some languages, subject and verb are related by agreement. A topic, however, does not have such relationships with the verb, as illustrated by the English sentence in (2.23):

(2.23) On Tuesdays, *Mary* goes to the barber shop.

In (2.23), the subject *Mary* is the external argument of the verb *goes*, which agrees in person and number with the subject. The topic, *on Tuesdays*, is not related to the verb in these ways. The explanation for this is that topic selection is determined from the perspective of discourse organization, but subject selection is determined from the viewpoint of the action (Li & Thompson, 1976; Tsao, 1990).

2.3.2. Definiteness, Givenness and Sentence-initial Position

Definiteness (Chafe, 1976; Givón, 1987, 1992; Gundel, 1977, 1985) and **givenness** (Brown & Yule, 1983) are properties of topic that are discussed most frequently in the literature. These two properties are related in more than one way. Since the function of topic is to set up relevance between the current sentence and the previous discourse, a topic should have its referent in the discourse environment (verbal or nonverbal). It also has to be put in a form so that its referent is easy to identify. An NP that satisfies both these conditions would be a definite NP which is known to the speaker and the hearer, and always presenting given information (Firbas, 1964; Keenan & Schiefflin, 1976). If we relate these two properties to another characteristic of topic, i.e., **sentence-initial position** (Halliday, 1967), the use of definite NPs as topics would seem to be intuitive, because both the speaker and the hearer need to identify what is being talked about at the beginning of a sentence[13].

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13 Tsao (1990) discusses this point in greater details. He points out that the meaning of "sentence" here is ambiguous and needs to be further clarified. Since this does not concern the present research directly, I will not go into details here.

A subject, however, does not always have these characteristics. (2.24a) and (2.24b) are two Chinese examples:

(2.24) a. Women ban lai le yige *xin xuesheng* .
we class come PRT one new student
A new student came to our class.

b. Chuang-shang shui le *ren* .
bed on sleep PRT person
Somebody is lying in the bed.

In (2.24), both topics (*women ban* 'our class' and *chuangshang* 'in the bed') refer to specific entities that both the speaker and the hearer can uniquely identify. They are definite NPs, representing given information, and in sentence-initial position. The subjects *xin xuesheng* 'new students' and *ren* 'person' do not refer to specific entities. They are unknown to the speaker/hearer, indefinite, and present new information.

2.3.3. Involvement in Clause-level vs. Discourse-level Manifestations

From a structural perspective, there is another distinction between topic and subject, a subject can be involved in clause-level grammatical manifestations such as passive construction as in (2.25), reflexivization as in (2.26), and serial verb construction as in (2.27). Topics are not involved in such manifestations (Li & Thompson, 1981; Tsao, 1990).

(2.25) a. Zuotian, *Zhangsan* da po le chuanghu. (Active)
yesterday Zhangsan hit break PRT window
Yesterday, Zhangsan broke the window.

b. Zuotian, *chuanghu* bei Zhangsan da po le. (Passive)
Yesterday window PRT Zhangsan hit break PRT
Yesterday, the window was broken by Zhangsan.

(2.26) Zhangsan$_i$, baba$_j$ zhi gu ta-ziji$_j$.
Zhangsan, father only look-after himself
Zhangsan, his father only looks after himself.

(2.27) Zhangsan$_i$, *wo*$_j$ yijing da dianhua ___$_j$ tongzhi ___$_i$ le.
Zhangsan I already make phone call inform PRT
Zhangsan, I have already made a phone call to inform (him).

(2.25) shows that passivization involves a change in word order. But the topic of the sentence remains intact. In (2.26), the reflexive *ta-ziji* 'himself' only refers to *baba* 'father', not *Zhangsan*. In the serial verb construction in (2.27), the person who performs the second action *tongzhi* 'inform' can only be the subject *wo* 'I'. The restrictions on the interpretation of these structures, as Li & Thompson (1976) explained, are due to the fact that these structures are grammatical manifestations on clause level. Topic, as basically a discourse notion, is detached from such syntactic manipulations. The object of *tongzhi* 'inform' in (2.27), however, is empty due to a process called topic NP deletion (Tsao, 1990), which is a discourse phenomenon.

In spite of the large literature on the above properties of topic, however, it would not take long to find counterexamples. Some researchers have demonstrated that none of the above-mentioned properties are necessary conditions for topichood. Oosten (1986, p. 29), for example, invokes prototype theory to illustrate that, just as other linguistic categories, topic also has prototype structure. With "aboutness" being the only necessary attribute in general, a prototypical topic also has a small set of other attributes that cluster to be present, i.e., givenness, definiteness, in sentence initial position, and so on. Some of these characteristics, such as definiteness, the use of pause particles and the control of deletion, have been used as tests of topic status of NPs (Tsao, 1990).

2.4. Chinese as a Topic-prominent Language vs. English as a Subject- prominent Language

In addition to the important innovation in the analysis of Chinese by using the notion of topic, Li & Thompson (1976) also found that languages can be classified "according to the prominence of the notions of topic and

subject" in sentence structure. The term "prominence" refers to the role that a linguistic notion or relation plays in the structure of a language. If structure A plays an important role in the construction of sentences in a language, then the language is said to be "A-prominent". Based on their cross-linguistic survey, a four-category typology was proposed: topic-prominent (e.g., Chinese, Lahu and Lisu), subject-prominent (e.g., English and most Indo-European languages, Dyirbal and Indonesian), or neither (e.g., Tagalog and Ilocano), or both (e.g., Japanese and Korean).

In order to support the typology, Li & Thompson (1976) demonstrated some major differences between topic-prominent and subject-prominent languages based on their survey. Their study triggered a line of research in the area. In this section, I will first discuss some of the major differences between topic-prominent and subject-prominent languages, using examples in Chinese and English. Since it is expected that Chinese, as a topic-prominent language, uses a large variety of TCSs, I will, in the second part of this section, present a categorization of the types of TCSs in Chinese.

2.4.1. Characteristics of Topic-prominent and Subject-prominent Languages

SURFACE CODING. All languages have some way of marking topics. What distinguishes topic-prominent languages is that the marking of topics is invariant. Topics are always uniquely distinguishable by some type of surface coding. For example, in Japanese and Korean, topics are marked by special morphemes, while in Chinese, they occupy the sentence-initial position (Fuller & Gundel, 1987; Gundel, 1987). In subject-prominent languages, topics are also coded, but the ways of coding are not invariant. In English, topics can be coded in sentence-initial position, but they can also be coded by articles, pronouns or other devices. The following example is observed by Fuller & Gundel (1987) in their data:

(2.28) The goldfish lay on the table next - under the aquarium. And it looked like the goldfish was dead.

In (2.28), the topic of the second sentence is coded by the repetition of the NP "the goldfish" in the previous sentence. This NP, i.e., the one in the second sentence, is in non-sentence-initial position. Fuller and Gundel (1987) note that the second sentence in (2.28) could also be "And the fish looked like it was dead". This is an example of the variability in topic coding. Compared to this variable coding of topics, English has invariant surface marking for subject, i.e., by sentence-initial position and the agreement between subject and verb. This difference between Chinese and English indicates that Chinese presents a closer and more consistent relationship between topic and sentence-initial position, while in English, the sentence-initial position is split between coding topic and subject.

EXPLETIVE SUBJECTS. In a subject-prominent language such as English, when the logical subject of a sentence is not in preverbal position, an expletive subject, such as *it* or *there* has to be used to fill the position. In Chinese, however, expletive subjects never occur. Sentences without subjects are very common.

PASSIVE CONSTRUCTIONS. Passive constructions are common among subject-prominent languages. In English, for example, a formal passive construction has to be used to express the meaning of passive. In topic-prominent languages, passive construction either does not occur at all, or appears as a marginal construction. In Chinese, the formal passive construction (with the use of passive particle *bei*) is rarely used, especially in speech[14]. Sentences with passive meaning are very often expressed by

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[14] In Chinese, the meaning of passive can be expressed by a variety of structures. One is the formal passive construction in which an overt passive particle *bei* is used. Simply speaking, the function of *bei* is similar to *by* in English (as in b. below), but it can also be used alone to indicate passive construction (as in c.):

a. Zhangsan da le Lisi.	b. Lisi bei Zhangsan da le	c. Lisi bei da le.
Zhangsan hit PRT Lisi.	Lisi PRT Zhangsan hit PRT	Lisi PRT hit PRT
Zhangsan hit Lisi.	Lisi was hit by Zhangsan.	Lisi was hit.

TCSs. This can be seen by a comparison of Chinese and English in (2.19) above.

SENTENCES WITH "DOUBLE SUBJECTS". Topic-prominent languages are "famous for their pervasive so-called 'double subject' constructions" (Li & Thompson, 1976; Xu & Langendoen, 1985). In this construction, the topic NP is not coreferential with any of the NPs in the following full clause comment, and is not introduced by any phrases such as "as for" in English. Such sentences are among the basic standard sentence types in Chinese, while in English they only occur in a casual spoken register (Bland, 1981).

CONTROL OF COREFERENCE. In a topic-prominent language, the topic, and not the subject, typically controls coreferential constituent deletion (Li & Thompson, 1976; Tsao, 1990). If a sentence has a topic and a subject with different referents, and an NP is deleted subsequently, the element that controls the deletion would be the topic NP rather than the subject NP. (2.29) illustrates this point:

(2.29) Neike shu$_i$ *yezi* da, wo bu xihuan e_i.
that tree leaves big, I not like
That tree, the leaves are big, I don't like (it).

In (2.29), *nei ke shu* 'that tree' is the topic, *yezi* 'the leaves' is the subject. The NP after *xihuan* 'like' is deleted. If we recover the NP according to the meaning, it would be *nei ke shu* 'that tree', not *yezi* 'the leaves'. Such structures do not exist in English.

ZERO ANAPHORA. Zero anaphora exists in all languages (Gundel, 1978, 1980). However, the use of zero anaphora is both qualitatively and quantitatively different in Chinese and English. They are qualitatively

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A second construction to indicate passive meaning is a TCS such as (2.19). Structurally, however, sentences like (2.19) are topic-comment, not passive constructions, even though the meaning is passive. For this reason, it is usually referred to as "pseudo-passive" or "middle voice". For further analysis on passive sentences in Chinese, see Section 2.4.2.1.3, or refer to Hu (1991), LaPolla (1993) and Tsao (1990).

different because, in topic-prominent languages, the occurrences of zero anaphora are pragmatically constrained, i.e., the missing NP is coreferential with the topic of the sentence. This can be seen in many of the earlier examples. In subject-prominent languages such as English, however, the use of zero anaphora is also structurally constrained in addition to the pragmatic constraint. The rules proposed in Government and Binding theory represent efforts to capture the structural constraints[15]. The quantitative difference in the use of zero anaphora in Chinese and English lies in the fact that zero anaphora occurs much more frequently in Chinese than in English. (2.30) and (2.31) are examples from native speakers' narratives obtained by Xie (1992) to illustrate this point:

(2.30) Zhe shi yige zhongniande nanzi, ∅ ganggang cong ditie wangwai
this is a middle-aged man, ∅ just from subway to-outside

zou chulai, ∅ shouli nazhe yijuan baozhi, ∅ dizhe
walk out, ∅ in-hand carry a-roll-of newspaper, ∅ hang-down

naodai, ∅ xinqing feichang chenzhong, ∅ wang huijia de
head, ∅ emotion very depressed, ∅ towards return-home DE

lushang zouqu.
road walk.

'This is a middle-aged man coming from the subway. (He is) carrying a roll of newspaper in his hand and, (he is) hanging his head, with depressed emotion, (he is) walking along the road toward home.'

(2.31) a. He took the subway to work every day and ∅ worked very hard.
b. She sits down, and ∅ eats by herself, and ∅ hopes her friends would tell her why.

As can be seen in the above examples, the deletion controlled by a topic can be extended over a long distance in Chinese. As a result, so called "topic chains" in Chinese are very often much longer than those in English.

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15 Please refer to Chomsky (1981) and Huang (1984) for details.

In the foregoing discussion, I have outlined fundamental differences between Chinese and English sentence structure. I have also shown that topic is an essential element for Chinese sentences. By using the notion of topic in syntactic analysis, Li & Thompson's approach (1976, 1981) not only captures the characteristics of topic-prominent languages such as Chinese, but also finds cross-linguistic justification for their typology.

2.4.2. TCSs in Chinese

Since Chinese is categorized as a topic-prominent language, it is expected that the notion of topic is utilized in the construction of sentences to a greater degree than in other non-topic-prominent languages. A larger variety of TCSs in Chinese are also expected. A survey of the literature on the analysis of Chinese in terms of TCSs reveals that this is indeed the case. The major research in this area has been done by Tsao (1990) who analyzed and categorized Chinese TCSs in all different sentence types. His work presents detailed argumentation and different tests for the analysis of different TCSs in Chinese. Due to the limitation on space here, I will only be able to present a simplified version of his analysis of TCSs in simple sentences. The purpose is to show the large variety of TCSs in Chinese. Interested readers are advised to refer to Tsao (1990) for a complete analysis and Hu (1991) for an analysis in a similar approach.

2.4.2.1. Simple One-topic Sentences

2.4.2.1.1. Canonical Clause Type

According to Tsao (1990), the simplest clause type in Chinese is one in which one topic NP occurs as the only nominal before a verb, especially when the nominal can also be identified as the subject of the sentence and the agent of the action at the same time. Such a sentence is shown in

(2.32). This should be regarded as "the canonical clause type in Chinese in the sense that it is closest to our mental representation of the verb-controlled clause patterns, i.e., one based exclusively on syntactic and semantic consideration without being tempered with by the informational and discoursal consideration" (p. 67).

(2.32) Ta mai le yiben shu.
he buy PRT one book
He bought a book.

In addition to a verb phrase, the comment part of a sentence can also be made of other phrasal types, for example, an adjectival phrase[16] as in (2.33) and a noun phrase[17] as in (2.34).

(2.33) Ta hen gao.
he very tall
He is very tall.

(2.34) Jintian xingqiwu.
today Friday
Today is Friday.

2.4.2.1.2. Existential and Presentative Sentences

A group of sentences that distinguish itself from others in almost all languages are existential and presentative sentences. In Chinese, such sentences always appear in the pattern in (2.35):

(2.35) locative expression + Verb + indefinite NP

The verbs in such sentences have to be either existential verbs such as *you* 'exist/there be', verbs of position such as *zuo* 'sit', *gua* 'hang', or verbs of

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16 Tsao (1990) analyzes this group as sentences "with adjectives as its main verb".

17 This type is not included in Tsao (1990).

motion such as *lai* 'come' and *zou* 'leave'. (2.36) - (2.38) illustrate the structure:

(2.36) Men-wai you liangge ren.
door-outside there-be two people
There are two people outside the door.

(2.37) Jiaoshi-li zuo le henduo xuesheng.
classroom-in sit PRT many student
Many students are sitting in the classroom.

(2.38) Women ban lai le liangge ren.
our class come PRT two people
Two people came to our class.

In these sentences, topics are designated by locative expressions. The post-verbal NPs, which are the subjects of the sentences, occur post-verbally to satisfy the information structure of Chinese which requires that indefinite NPs appear after verbs.

2.4.2.1.3. Passive Sentences

Another group of sentences that distinguish themselves are sentences with passive meaning. In Chinese, the meaning of passive is usually expressed in four different structures, a) with *bei* construction as in (2.39), b) with other "passive verbs" such as *ai* 'receive' and *shou* 'receive' as in (2.40), c) *shi . . . de* structure as in (2.41), and d) with verbs in "middle voice" as in (2.42).

(2.39) Ta bei ren da le.
he BEI people beat PRT
He was beaten up by other people.

(2.40) Ta shou piping le.
he receive criticism PRT
He was criticized.

(2.41) Neige zi shi ta xie de.
that character SHI he write DE
That character was written by him.

(2.42) Wode yifu xi le.
my clothes wash PRT
My clothes have been washed.

In each of the above sentences, the first NP is the topic of the sentence. But, semantically, it is the patient of the respective action verb.

2.4.2.2. Sentences with Local Secondary Topics

In this group, each sentence has two NPs in preverbal position, the first being the primary topic and the second being a secondary topic. For both of the constructions included in this group, the secondary topics show no signs on the surface of having been moved. The first construction is the so-called "double nominative" construction, as shown in (2.43); the second contains non-sentence-initial preverbal locatives and temporal expressions as topics, as in (2.44).

(2.43) Ta baba si le.
he father die PRT
a. TOPIC SUBJECT
Speaking of him, (his) father died.

b. $TOPIC_1$ $TOPIC_2$
Speaking of him, about his father, (he) died.

(2.44) Ta zuotian mei lai.
he yesterday not come
a. TOPIC & SUBJECT
Speaking of him, (he) did not come yesterday.

b. $TOPIC_1$ $TOPIC_2$
Speaking of him, yesterday, (he) did not come.

Notice that for both (2.43) and (2.44), there are two interpretations. Depending on the discourse context the sentences occur in, the second NP

can be either the subject or the secondary topic for the respective sentences. The status of the second NPs as secondary topics can be tested by using some of the characteristics of topic specified earlier in Section 2.3[18].

2.4.2.3. Sentences with Non-local Secondary Topics

In this group, the secondary topics show signs of movement in their surface form. There are three constructions included in this group: a) *ba* construction as in (2.45), b) object fronting construction as in (2.46), and c) VO-topicalization as in (2.47).

(2.45) Zhang Xiansheng ba shu mai le.
Zhang Mr. *ba* book(s) buy PRT
Mr. Zhang bought the book(s).

(2.46) Zhang Xiansheng shu mai le.
Mr. book buy PRT
Mr. Zhang, the book(s) (he) bought.

The analysis of (2.45) is that BA puts the patient in preverbal position. At the same time, it sets the NP after it as a secondary topic[19]. In (2.46), *shu* 'book' is not in its normal position for a patient. It is preposed to the position in front of the verb.

(2.47) a. Ta xie de hen kuai.
he write *de* very fast
He writes very fast.

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[18] Also see Tsao (1990) for details of the tests.

[19] Hu (1991) also analyzes the following passive sentences as having a secondary topic:

Shu bei Zhang Xiansheng mai le.
book(s) *bei* Zhang Mr. buy PRT
The book(s) was/were bought by Mr. Zhang.

He claims that both *ba* and *bei* establish the following NP as a second topic. The difference between the two is that BA is used to mark a patient or locative whereas BEI is used to mark an agent or experiencer.

b. * Ta xie zi de hen kuai.
he write characters *de* very fast

c. Ta xie zi xie de hen kuai.
V_1 V_2
he write characters write DE very fast
He writes characters very fast.

(2.47) are sentences with descriptive complements. When the verb *xie* 'write' has an object *zi* 'characters', the object cannot be put between the verb and the particle DE, as shown in (2.47b). The verb *xie* 'write' has to be duplicated as in (2.47c) with the object between the two repeated verbs. Tsao's analysis (1990) is that *ta* 'he' is the primary topic. The V_1 + O, i.e., *xie zi* 'write characters', is a nominalized verb phrase which is topicalized to the preverbal position as a secondary topic[20].

2.4.2.4. Sentences with Special Topics

Two structures are included in this group: a) *lian . . . dou/ye* construction as in (2.48), and b) comparative construction as in (2.49). In these two structures, LIAN and BI establish the following NP as secondary topics.

(2.48) Ni lian ta dou bu renshi.
you LIAN he DOU not know
You even don't know him.

(2.49) Ta bi wo gao.
he compare I tall
He is taller than me.

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20 Hu (1991), however, offers a different view. His analysis is that the particle DE is used to nominalize the previous VP in both (2.47a) and (2.47c) and mark it as the secondary topic. The postverbal complement is the comment. In a sentence with duplicated verbs as in (2.47c), both verbs are nominalized (p. 133-136).

As has been pointed out before, the approach of analyzing Chinese from the perspective of TCSs is relatively new. Tsao's study (1990) represents pioneer work in this field. In this section, I have only presented TCSs in simple sentences. These TCSs can, of course, be used in complex sentences. For example, they can be used in relative clauses, or they can be used in sentential subject or object clauses. In addition, topics themselves can also be in clausal form. They can be clauses of condition, time, concession, reason and so on. Due to the fact that the present study only deals with simple sentence structures, TCSs in complex sentences will not be presented here.

2.4.3. Grammatical Characterization of TCSs

In sections 2.2 and 2.3, I have devoted my discussion to the definitions and properties of topic that can be applied to both English and Chinese. I have deliberately kept the issue of the relationship between topics and their related elements in comments for a separate section because this is where the differences between English and Chinese reside. Now, it is time for me to probe this issue. I will start with a description from the formal approach.

The theory of Government and Binding provides a characterization of TCSs from a structural point of view (Chomsky, 1981; Lasnik & Uriagereka, 1988). According to this approach, TCSs in English are divided into two types, *left-dislocation* as shown in (2.50a) below, in which the topic is associated with a pro-form (e.g., *it*) in the comment, and *topicalization* as in (2.50b) in which the topic is associated with an empty position *e* in the comment (Ross, 1967).

(2.50) a. This book$_i$, I enjoyed it$_i$.

b. This book$_i$, I enjoyed e_i.

For English, there is a general consensus in analyzing the topic in left-dislocation as base-generated in the sentence-initial position and

coreferential with the pronoun in the comment (Chomsky, 1977; Ross, 1967). The arguments for this analysis are a) since the topic in left-dislocation is associated with a lexicalized pro-form in the comment, it cannot originate from the position of the pro-form; and b) the two coreferential elements are not subject to the constraints on movements, as the examples in (2.51) below demonstrate. *Topicalized* constructions, however, are different. The topic in topicalized constructions and its corresponding empty category in the comment are subject to movement constraints. Exemplified below are examples from Brunson (1992) to illustrate this point:

(2.51) a. $John_i$, I know [$_{NP}$ a man [$_S$ who met him_i in the park]].

b. $John_i$, I heard [$_{NP}$ the claim [$_S$ that he_i met Mary in the park]].

(2.52) a. *$John_i$, I know [$_{NP}$ a man [$_S$ who met t_i in the park]].

b. *$John_i$, I heard [$_{NP}$ the claim [$_S$ that Mary met t_i in the park]].

In GB theory, the Subjacency condition regulates that a single instance of movement can cross at most one bounding node, where the bounding nodes are S and NP for both English (Chomsky, 1981; Lasnik & Uriagereka, 1988) and Chinese (Li, 1990)[21]. (2.51) is an example of left-dislocation in which the correspondence between the topic and the pro-form crosses two bounding nodes (i.e., S and NP), but the sentences are still grammatical. This is taken as evidence for the non-movement analysis of left-dislocation. In (2.52), the correspondence between *John* and *e* also crosses two bounding nodes, but the sentences are ungrammatical. This shows that *John* and *t* in (2.52) are subject to the Subjacency condition. Therefore, *t* is analyzed as a trace left by a movement.

Another supporting argument for the movement analysis of topicalized construction is that movements in general do not tolerate Strong

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[21] According to the theory, bounding nodes can vary across languages. There have been inquiries about what are the bounding nodes for Chinese. Contrary to Li (1990), Xu (1986) claimed that "it would make no difference if S' instead S were the bounding node in Chinese."

Crossover violations, that is, a moved element cannot cross a coreferential c-commanding NP (See Chomsky, 1981; Lasnik & Uriagereka, 1988 and Postal, 1971 for details). This applies to *wh*-movement in (2.53a) and (2.53b), in which *he* cannot be coreferential with the *wh*-word and the *wh*-trace:

(2.53) a. Who_i does he_j think Mary likes t_i?

b. *Who_i does he_i think Mary likes t_i?

It also applies to topicalization, as shown in (2.54) and (2.55):

(2.54) John_i, he_j thinks I like t_i.

(2.55) *John_i, he_i thinks I like t_i.

The fact that topicalization is subject to Subjacency and Strong Crossover conditions is taken as evidence for the movement analysis of topicalized constructions in English. The following figure is an account of the "topicalization" process for (2.50) *This book I enjoyed*, using more current notions in syntactic analysis (cf. Drubig, 1992; Rochemont, 1989):

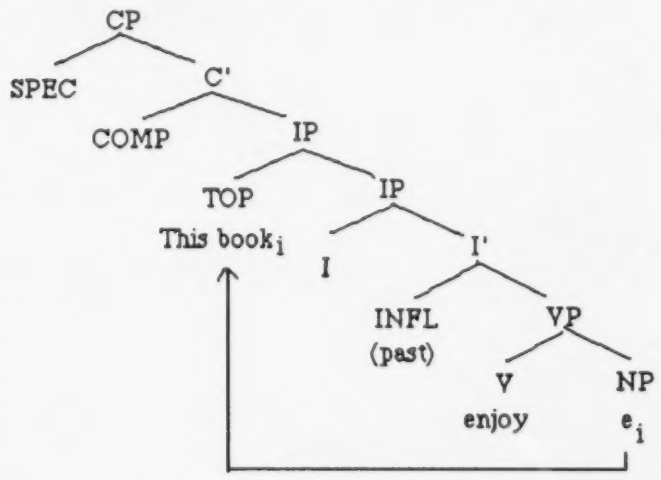

Figure 2.5: Topicalization in English

Compared to topicalized structures in English, TCSs in Chinese do not seem to be the same phenomenon. The differences are both quantitative and qualitative. Quantitatively, TCSs only take up a small percentage of English sentences, while the majority of Chinese sentences have to be accounted for by using the notion of topic. Qualitatively, the following evidence suggests that Chinese TCSs may not be best characterized by using the notion of movement.

First of all, in addition to the fact that Chinese has structures equivalent to "left dislocation" in English, it also has the so called "double subject" constructions" (cf. (2.11) in section 2.1.2) in which the topics are not coindexed with any elements in the comment. In these structures, the topics have to be generated in topic position.

Secondly, if we assume that the movement analysis proposed within GB theory also applies to Chinese, the movements must be subject to constraints. This, however, is not true for Chinese. As Xu & Langendoen (1985) demonstrate, neither Strong Crossover nor Subjacency Conditions apply to Chinese. (2.56) is one of their examples for Strong Crossover violations:

(2.56) Zhangsan$_i$, ta$_i$ shuo e_i mei kanjian Lisi
Zhangsan he say didn't see Lisi
Zhangsan, he said (he) didn't see Lisi.

The structure of (2.56) is illustrated by the following tree diagram in Figure 2.6 below:

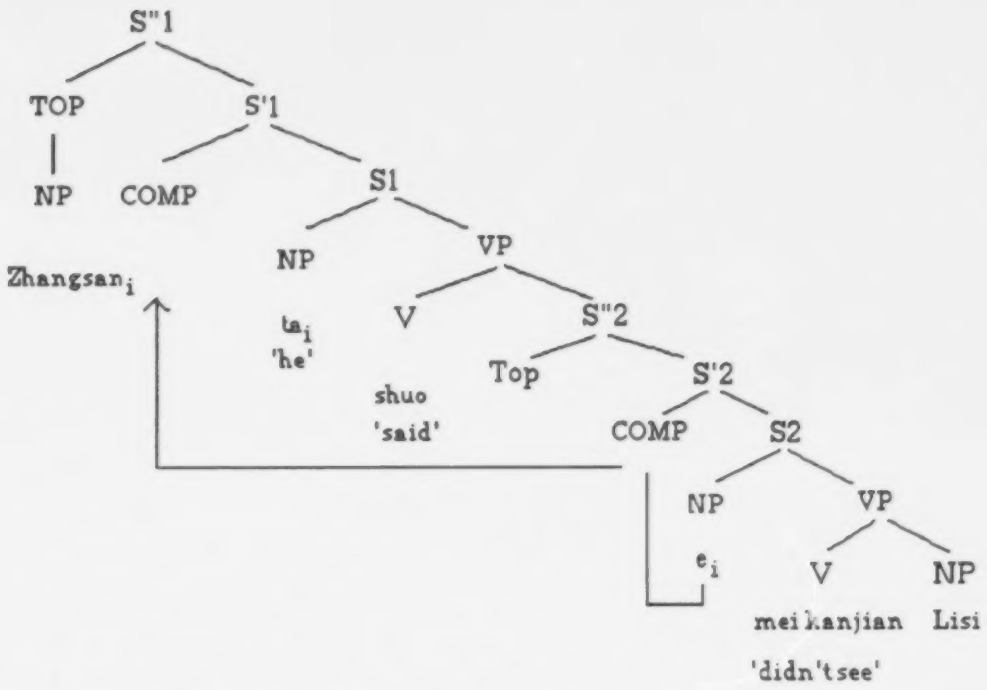

Figure 2.6: Strong Crossover Violation in Chinese

If we assume a *wh*-movement analysis of topics (cf. Huang, 1984), the movement in this case is supposedly from the position of *e* to the lower COMP in S'2, then to the higher COMP position in S'1. The second step crosses over *ta* which is a c-commanding element coreferential with *e*. This is a case of Strong Crossover violation. But the sentence is nevertheless acceptable.

Examples (2.57) and (2.58) are related to the Subjacency condition:

(2.57) [$_{S"1}$ [$_{Top}$ Zheben shu$_i$], [$_{S'1}$ [$_{Comp}$] [$_{S1}$ wo renwei [$_{S'2}$ [$_{Comp}$]
this book I think

[$_{S2}$ [$_{NP}$ [$_{S'3}$ [$_{Comp}$] [$_{S3}$ e_j du guo e_i de]] ren$_j$] bu
read PRT MOD people not

duo]]]].
many

This book, I think the people (who) have read (it) are not many.

(2.58) [S"1 [Top Zheige wenti$_i$], [S'1 [Comp] [S1 wo conglaimei yudao
this question I never meet

guo [NP [S'2 [Comp] [S2 e_j neng huida e_i de]] ren$_j$]]]].
PRT can answer MOD people

"This question, I've never met anybody (who) can answer (it)."

According to Huang's (1984) analysis, the topic NPs in (2.57) and (2.58) are moved from the *e* in the object positions of the relative clauses (i.e., S3 in (2.57) and S2 in (2.58)) to the sentence-initial topic position. In both cases, they stop at the lowest COMP first, and then continue to move up by COMP-to-COMP movement. Notice that the second step in both movements crosses two bounding nodes and violates the Subjacency Condition. That is, in (2.57) it crosses NP and S2, and in (2.58) it crosses NP and S1. Nevertheless, the sentences are acceptable.

Thirdly, if we say that topic is moved out from the following S, the S should be well-formed before the movement. This is true for all English topicalized structures, but is not always true for Chinese. For example, (2.59a) is a TCS in Chinese. According to the movement analysis, the topic, i.e., *cun li* 'in the village', is moved out from the position of the blank which is the position for adverbial locatives in the canonical word order. However, putting the topic back in the position of the blank results in an ungrammatical sentence, as (2.59b) shows. In order for these sentences to be grammatical, a preposition *zai* 'be' has to be inserted as in (2.59c). This is a phenomenon difficult for the movement analysis to handle.

(2.59) a. Cun li, renmen _____ gai le xin fangzi.
village in people build PRT new house(s)
In the village, people have built new houses.

b. * Renmen cun li gai le xin fangzi.
people village in build PRT new house(s)

c. Renmen zai Cun li gai le xin fangzi.
people be village in build PRT new house(s)
People have built new houses in the village.

Fourthly, if TCSs are the result of movement, the structure after a movement would be expected to be more marked than the structure before the movement. This, however, is not always the case for Chinese:

(2.60) a. Nide shu wo kan le san bian.
your book I read PRT three times
I have read your book for three times.

b. ? Wo kan le san bian nide shu.
I read PRT three times your book

c. ??? Wo kan le nide shu san bian.
I read PRT your book three times

For these sentences, (2.60a) is the most natural. In (2.60b), *nide shu* 'your book' sounds as though it has been added at the end of the sentence either for clarification or as an afterthought. (2.60c) is in SVO order, but it is very marginal.

Fifthly, in Chinese, there is another type of topic which delimits the scope of the following comment (Tsao, 1990):

(2.61) Najian shi, zhengfu you guiding.
that thing government has regulations
About that, the government has regulations.

(2.62) Zhu, Taibei zui hao. Chi, zizhucan zui pianyi.
live Taibei most good eat buffet most inexpensive
(Talking about) living, Taibei is the best place. (Talking about) eating, buffet is the most inexpensive.

In this type, the topics do not play any syntactic roles in the following clauses. They cannot be considered as having been moved out from anywhere within the comment.

Tsao (1979) provides another argument from the perspective of speech production. He argues that a topic is determined during discourse planning, which is definitely prior to the planning of a specific sentence within the discourse. Given the topic, the syntactic organization of the sentences under its domain is developed according to, and also constrained by, the topic (p. 244).

Following these arguments, it is clear that a non-movement analysis of topic can better characterize the TCSs in Chinese. Relating to the configuration in (2.20), a non-movement analysis proposes that Chinese sentences are generated at the S' level with topic in the sentence initial position. Actually, this is not a new innovation. Some grammarians, e.g., Gundel (1977), Tsao (1979) and even Huang (1984), who works within the GB approach, have suggested such a possibility. I believe this view is also consistent with Li & Thompson's (1976, 1981) analysis[22].

2.5. TCSs, Word Order and Cohesion in Discourse

The analysis carried out so far has provided basis for an understanding of the defining characteristics of topic, the grammatical properties of TCSs and the major differences between Chinese and English in utilizing the notion of topic in the organization of sentences. However, since the present study examines the acquisition of TCSs, knowing the characteristics of TCSs is only the first step. The acquisition of TCSs includes not only the acquisition of the grammatical characteristics of TCSs, but also the acquisition of when certain TCSs should be used. This is the area where the functional analysis comes in to supplement what is not investigated by the formal analysis of grammaticality. In this section, I would like to discuss the function of TCSs in topic management and the relation between the use of TCSs, word order, and cohesion in discourse.

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22 Interested readers may refer to Huang (1992) for a non-movement analysis of Chinese TCSs in the approach of Lexical Functional Grammar.

2.5.1. Functions of Topic in Discourse

In any discourse, topics have to be sustained for a certain length of time in order for the participants to gather enough information about the topic and to keep track of what has been talked about. Changing topics too frequently may result in lack of cohesion. Topic continuity can be maintained through various linguistic devices such as stress and intonation, semantically related words and phrases, conjunctions, adverbials, word order and so on. Different languages may use the same or similar devices to maintain topic continuity, but to a different extent. In Chinese, for example, topic chains[23] and TCSs are utilized to a larger extent than in subject-prominent languages (Hu 1991).

Since TCSs also occur in English, one may wonder exactly in what ways TCSs are used differently in Chinese and English. Let's consider the discourse functions of TCSs first. Unfortunately, this is one of the areas where very little research has been done. Among the scant work done, Tsao (1979) analyzed the functions of topic in Chinese, while Bland (1981) examined TCSs in English. Both of these studies observed data from unplanned discourse. Chafe (1976) compared the function of topic in Chinese and English.

The first function of topic Tsao (1979) characterized is the so-called "relating function", i.e., "the topic serves as a link between what has been said and what is going to be said" (p. 209), as (2.63) exemplifies (the topics are underlined):

(2.63) Wo zuotian jiandao Wang Xiansheng le. Ta shuo ta
I yesterday see Wang Mr. PRT he say he
jintian yao lai.
today will come

I saw Mr. Wang yesterday. He said he would come today.

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[23] Please refer to Hu (1991, p. 145-147) for an analysis of topic chains.

This function is also observed in English. The English translation of (2.63) is an example within one turn in a conversation. (2.64) given by Bland (1981) relates two consecutive turns in a conversation[24]:

(2.64) Context: Some students are talking about apartment expenses.
Speaker A: The only thing I have to pay for is electricity and the phone bill.
Speaker B: Oh phone bill, I got my phone bill yesterday.

The second function of topic is the "introducing function"; that is, a topic can introduce a new topic into the discourse. This is observed in both Chinese as in (2.65) and English as in (2.66):

(2.65) Shanghai xia wu de shihou bu tai duo, Chongqing chang
Shanghai fall fog DE time not too many Chongqing often

xia wu, you-dianr xiang Lundun. Zaofan dagai kuai
fall fog a bit like London breakfast probably almost

hao le. Women chi zaofan ba.
ready PRT we eat breakfast PRT

Shanghai is not often foggy; Chongqing is often foggy, somewhat like London. Breakfast must be ready soon. Let's have breakfast.

(2.66) Context: Two students greet each other after a short vacation from school.
Speaker A: How was your break?
Speaker B: My papers, the whole break was ruined.

The Chinese example in (2.67) and the English example in (2.68) illustrate the third function of topic, i.e., the "contrastive function":

(2.67) Fan bu chi le. Cai zai yong yixie.
rice not eat PRT vegetable and meat more eat some
Rice, (we) will have no more. Vegetable and meat, (we will) have some more.

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24 Bland (1981) calls this "retrieving function".

(2.68) Ronald made the hamburgers, but Sally made the salad.

Another function of topic Bland (1981) discussed is the "retrieving function", in which an old topic that has not been in the centre of attention is retrieved and put into focus. Although Tsao (1979) did not discuss this function of topic, examples in Chinese are not hard to find. In the following, (2.69) provides one for Chinese; (2.70) provides one for English:

(2.69) Ni gangcai shuo de neige ren, ta houlai
you moments-ago mention *de* that person he later-on

zenmeyang le?
how PRT

The person you talked about a moment ago, what happened to him later?

(2.70) Context: Professor talking to students in a semantics seminar about possible quantifiers. Six different possibilities are listed on the board and are being discussed.

Professor: (pointing to the blackboard) Some of these I don't think you ever come across in natural language.

Bland (1981) also claims that topic can have the function of helping in overcoming processing difficulties. She explains that in unplanned discourse, a speaker may start out a sentence with an NP without much planning. But later, he or she has to fix it up, by using a resumptive pronoun for example, as (2.71) shows:

(2.71) Context: Talking about phone bills.

Speaker: One of the people who lives in my apartment, her boyfriend goes to Rochester, and they call each other every three nights.

Using the initial NP as topic in (2.71) may have another reason. The initial NP is already complex. If this NP is used to modify "the boyfriend", the complexity will be further increased, which is against the principle of

simplicity for conversational style. This phenomenon is also common in Chinese:

(2.72) Zuotian lai de nei liangge ren, gao de neige de
yesterday come DE those two people tall DE that DE

nu pengyou zhu zai wode sushe li.
girl friend live at my dorm in

Those two people who came yesterday, the tall one's girlfriend lives in my dorm.

The last function of topic, the chaining function discussed by Tsao (1979), is to keep utterances together on a coherent topic. This function can be performed by topic NP deletion in Chinese as in (2.73), and by the use of pronouns as the English translation of (2.73) shows:

(2.73) Zheige yinwen juzi hen nan, wo bu dong,
this English sentence very difficult I not understand

ta ye bu dong.
he also not understand

This English sentence is very difficult. I do not understand it. He does not understand it either.

The comparison of the above examples suggests that topics seem to have similar discourse functions in Chinese and English. Bland (1981) made this point by claiming that, although English is subject-prominent, the basic functions of topics do not really differ very much from those in topic-prominent languages like Chinese, at least in informal registers[25].

2.5.2. Contextual Requirements for the Use of TCSs

With the discourse functions of topic settled, let's explore another area in which Chinese and English differ, i.e., the discourse context for the

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25 Different from Bland (1981), Chafe (1976) claims that all English TCSs are restricted to the contrastive function (e.g., as in *California is boring. But San Diego, I love.*).

use of TCSs. Due to the differences between Chinese and English in topic vs. subject prominence, the same discourse context may trigger the use of TCSs in Chinese, but not in English. Two examples from Hu (1991) can be used to make this point:

(2.74) Ta$_i$ na lai le shu, ___$_i$ jiu hui jia le.
he bring come PRT book then return home PRT
He brought the/a book here, then, (he) went home.

(2.75) Shu$_i$ ta na lai le, ____$_i$ meiyou yisi.
book he bring come PRT not interesting.
*The book, he brought here, is not interesting.
He brought the book here, (and the book) is not interesting.

In (2.74) and (2.75), the first part of the sentences, i.e. *Ta na lai le shu* and *Shu ta na lai le* are in different word orders, but have the same propositional content (i.e., 'he brought the book here'). They are both grammatical. However, the different orders are required by the different contexts in Chinese. (2.74) is about *ta* 'he'; the empty position has to be coreferential with the topic in the sentence initial position to form a topic chain. (2.75) is about *shu* 'book' which also has to be coreferential with the empty position in the second part of the comment. Discourse planning as well as the context, i.e., the second part of (2.74) and (2.75), determine the use of the different TCSs in the first parts of these sentences.

In English, topic chains such as the one in (2.74) do exist, hence the easy interpretation and translation of (2.74) from Chinese into English. Topic chains such as the one in (2.75) ("The book, he brought here, is not interesting") do not exist in English[26]. Although objects can be used in topic position in English (e.g., "San Diego, I love."), the context in (2.75) does not trigger the use of such a structure in English.

The reason for this, I believe, is closely related to the position of the relative clauses in the two languages. In Chinese, relative clauses precede

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[26] If "he brought here" is understood as a relative clause as in "The book (that) he brought here is not interesting", then the sentence is good, but it has a different structure.

the noun they modify. Thus, the first part of (2.75), i.e. *Shu ta na lai le*, can only be interpreted as a TCS with the object in topic position. "The book that he brought here" in Chinese would be in the form of (2.76). There could be no ambiguity in interpretation.

(2.76) Ta na lai de shu
he bring come MOD book

English, however, is different. "The book he brought here" can be interpreted in two different ways, a) as an NP with a relative clause ("the book (that) he brought here"), or b) as a TCS with the object in topic position ("The book, he brought (it) here"). The tendency to push for the first interpretation in English is very strong, especially when the structure occurs at the beginning of a discourse[27]. This, I believe, is the reason that this structure is restricted in English mostly (if not exclusively) to contrasts such as "California is boring, but San Diego I love".

This is only one example of the different contextual requirements for the use of TCSs in Chinese and English. I believe that further studies may reveal more differences between this aspect of the two languages.

2.5.3. TCSs, Word Order and Comprehension

The choice of different elements as topics naturally results in different surface word order. In discourse, specific word orders may be required by specific contexts for the purpose of cohesion and topic maintenance. Choosing one word order over the other may also affect comprehension. In (2.74) and (2.75) above, although the first part of the sentences have basically the same propositional content, the order can not be reversed as in (2.77) and (2.78):

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[27] I consulted some English L1 informants. Most of them think that, without context, "The book I brought here." is not an acceptable sentence in English because it sounds like an unfinished sentence with only an NP with a relative clause. This shows the tendency in English to interpret such a structure as one with a relative clause. In Chinese, however, such sentences are very common.

(2.77) *Ta na lai le shu, _____ meiyou yisi.
he bring come PRT book not interesting.
He brought the/a book here, and (he/?his bringing the book/?? the book) is not interesting.

(2.78) *Shu ta na lai le, ____ jiu hui jia le.
book he bring come PRT then return home PRT
The book, he brought here, then (the book?) went home.

In (2.77) and (2.78), the empty positions would most likely be interpreted as coreferential with the topic of the respective sentences, i.e., they are part of the topic chains. In Chinese, different parts of a topic chain have to be cohesive in that they either describe consecutive actions in chronological order, or they have some kind of semantic relationship such as cause and effect, reason and result, condition and so on. If (2.77) is interpreted as "He brought the book here and he is not interesting", the two parts do not seem to be related. This causes difficulty in comprehension. (2.78) has the same problem. If the sentence is interpreted as a topic chain, as it has to be, "the book" can not "go home" by itself.

Such differences in the choice of word order is captured by Lyons (1977) in his analysis of two types of sentences, "system-sentences" which are grammatical structures in a language, and "text-sentences" which are sentences actually used in discourse. The notion of these two types of sentences is also reflected in the terms "grammaticality" vs. "appropriateness". To illustrate using (2.74) and (2.75), both *Ta na lai le shu* and *Shu ta na lai le* are "system-sentences" (i.e., grammatical), but *Ta na lai le shu* is the "text-sentence" (i.e., appropriate) for (2.74) and *Shu ta na lai le* is the "text-sentence"(i.e., appropriate) for (2.75). The reverse is not true.

This illustrates that the choice of word order and the coding of a certain element as topic is, to a large extent, determined by the context of the utterance. It is also an important means of maintaining textual cohesion in Chinese.

The claim that Chinese is an SVO language and yet also topic-prominent may make one wonder how these two concepts correspond to each other. In language processing and production, how do these two concepts cooperate in the construction of sentences without causing difficulty in interpretation and, at the same time, encode corresponding conceptual structures in a clear fashion? The answer to these questions calls for a semantic analysis of TCSs. In addition, since the empirical study of the present research requires a categorization of TCSs according to their semantic characteristics, θ-role assignment is also an important issue. Therefore, in the next section, I will describe θ-role assignment and the correspondence between the conceptual and the syntactic structures adopted by the present study.

2.6. θ-roles in TCSs

In the present study, I adopt Jackendoff's approach (1983, 1990) for θ-role assignment in which thematic roles are seen as relational notions. They are defined structurally on the level of conceptual structure, rather than in the domain of syntax as assumed in GB theory.

Jackendoff (1983, 1990) postulates that "the innate formation rules for conceptual structure include a repertoire of major conceptual categories, i.e., the "semantic parts of speech". These categories include such entities as THING, EVENT, STATE, ACTION, PLACE, PATH, PROPERTY, and AMOUNT, each permitting a variety of more specific elaboration as shown in (2.77):

(2.79) Conceptual Categories (Jackendoff, 1990):

a. [PLACE] → [$_{Place}$ PLACE-FUNCTION ([THING])]

b. [PATH] → $\begin{bmatrix} \text{TO} \\ \text{FROM} \\ \text{TOWARD} \\ \text{AWAY-FROM} \\ \text{VIA} \end{bmatrix}_{Path} \left(\begin{bmatrix} \text{THING} \\ \text{PLACE} \end{bmatrix} \right)$

c. [EVENT] → $\left\{ \begin{matrix} [_{Event} \text{ GO ([THING], [PATH])}] \\ [_{Event} \text{ STAY ([THING], [PLACE])}] \end{matrix} \right\}$

d. [STATE] → [$_{State}$ BE ([THING], [PLACE])]

e. [EVENT] → $\left[_{Event} \text{ CAUSE } \left(\left[\left\{ \begin{matrix} \text{THING} \\ \text{EVENT} \end{matrix} \right\} \right] \right), \text{[EVENT]} \right]$

As Jackendoff (1990) explains, a conceptual constituent of the category PLACE can be elaborated as a PLACE-function plus an argument that belongs to the category THING. This argument serves as a spatial reference point, in terms of which the PLACE-function defines a region. An example of this would be the expression *under the table* in which *table* designates a reference object and *under* expresses a PLACE function that maps *table* into the region above it. In the same way, (2.77c) shows that the category EVENT can be elaborated as an EVENT-function of GO or STAY, each of which takes two arguments. The event GO denotes motion along a path. Its two arguments specify the THING in motion and the PATH it traverses, e.g., *go to school*.

Each of these categories is composed of lexical items that belong to this category. The information concerning which conceptual category each lexical item belongs to is specified in its lexical entry. (2.80) and (2.81) are two examples from Jackendoff (1990) that illustrate the content of lexical entries. We can see that the content of a lexical entry not only specifies the syntactic function of the item, but also includes a subcategorization frame and a lexical conceptual structure.

(2.80) drive
V
___ <NP_j> < PP_k >
[EVENT drive ([THING]$_i$, [THING]$_j$ [PATH]$_k$)]

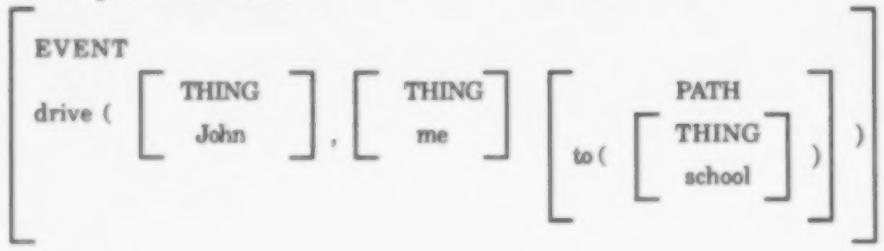
(2.81) to
P
___ NP_j
[PATH to ([THING]$_j$)]

Within each lexical entry in (2.80) and (2.81), the first line shows the lexical item; the second line specifies its lexical category; the third line indicates its subcategorization frame; and the last line denotes its conceptual structure. From (2.80) we can see that the lexical item *drive* is a verb. Syntactically, it subcategorizes for an optional NP and an optional PP. Conceptually, it expresses an event that requires three arguments. The first is an entity that belongs to the category of THING. It is indexed "$_i$" conventionally to indicate that it is the "external argument" (Williams, 1984). The second argument is also a THING, but it is a postverbal argument coindexed with the subcategorized NP. The third argument belongs to the category PATH which is coindexed with the subcategorized PP. If no PP is syntactically present, the argument PATH is simply unspecified. Similarly, (2.81) shows that *to* is a preposition. It subcategorizes for an NP which is coindexed with the argument position in its conceptual structure.

When these lexical items are used in a sentence, the sentence also has a syntactic structure as well as a conceptual structure, as (2.82) illustrates :

(2.82) a. Syntactic structure
[S [NP John] [VP drove [NP me] [PP to [NP school]]]]

b. Conceptual structure



In the syntactic structure (2.82a), the verb *drive* subcategorizes for an optional NP and PP. In the conceptual structure (2.82b), *drive* expresses a semantic structure that maps three arguments into an EVENT[28]. The arguments, corresponding to the readings of the subject, object and the PP in the syntactic structure, are two THINGs and a PATH. Every major phrasal constituent of the syntactic structure (e.g. NP, PP etc.) corresponds to some major category in the conceptual structure. Thus, the correspondence between the syntactic structure and the conceptual structure is set up (Jackendoff, 1983, 1990).

θ-role assignment in Jackendoff's theory is an operational process on the conceptual structure. For example, Agent, which is usually defined as the actor in an action event, is the first argument in the conceptual structure of the EVENT-function CAUSE. Theme, as the object in motion or being located, is structurally defined as the first argument in (2.79c) and (2.79d). Source, which is the object from which motion proceeds, is the argument of the Path-function FROM. Jackendoff's claim is that θ-roles such as Agent, Theme, etc. are not primitives of semantic theory. The system of θ-role assignment should not be a system of diacritics. Rather, θ-roles are relational notions defined structurally over conceptual structure. This is precisely comparable to the status of the notions subject and object which, according to some current syntactic theories (e.g., GB theory), is

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[28] An external argument is not subcategorized by the verb, but it is required in the conceptual structure.

defined structurally on a tree diagram. This approach to the analysis in conceptual structure and the θ-role assignment provides principled accounts for the close relationship not only between θ-roles and the conceptual structure, but also between the syntactic argument structure and the conceptual argument structure.

For TCSs in Chinese, if we assume that topics are generated in sentence-initial position, they will not be accommodated by the argument structure of the clause, but seen as adjuncts to the core structure of the clauses. The elements in TOP position would have to get their θ-roles from their corresponding elements (lexical or empty) within the following clause. In order for the TCSs to be interpretable, a link has to be established between a topic and its corresponding element. θ-role assignment in this manner, as we can see, has the potential of describing the functions of topic in discourse organization. However, the details of such an analysis is an issue that awaits research and, therefore, will not be pursued further here.

Proceeding with the above assumption, it will be easy to see that sentences with identical (or close to identical) meaning in Chinese and English would share the same conceptual structure, but differ in their syntactic organizations, as shown in (2.83) below.

(2.83) a. Conceptual Structure:

$$\left[\begin{array}{l}\text{EVENT} \\ \text{read}\ \left(\left[\begin{array}{c}\text{THING} \\ \text{I}\end{array}\right], \left[\begin{array}{c}\text{THING} \\ \text{the book}\end{array}\right]\right)\end{array}\right]$$

b. English Syntactic structure:

$[_S [_{NP}\ \text{I}\ ]\ [_{VP}\ \text{read}\ [_{NP}\ \text{the book}\ ]\ ]\ ].$

c. Chinese Syntactic Structure:

$[_{S'} [_{TOP}\ \underset{\text{this}}{\text{Zheben}}\ \underset{\text{book}}{\text{shu}_i}\ ]\ [_S\ [_{NP}\ \underset{\text{I}}{\text{wo}}\ ]\ [_{VP}\ \underset{\text{read}}{\text{kan}}\ \underset{\text{PRT}}{\text{le}}\ [_{NP_i}\ ]\ ]\ ]\ ].$

2.7. Summary

Before I go on, I would like to summarize the assumptions and the claims that have been made so far. In the previous discussion, I have assumed without questioning that both Chinese and English are SVO languages. I have also claimed that English is subject-prominent while Chinese is topic-prominent. From the formal approach, I have adopted the movement analysis for English TCSs, while pointing out that Chinese sentences can be better characterized by base-generated topic and comment. For the roles that TCSs play, I have demonstrated that TCSs can be used to introduce new topics into the discourse, to maintain an old topic and to retrieve old information that is fading away. I also take the view that English and Chinese TCSs have the same discourse functions, although this may be limited to informal daily conversation and the extent to which TCSs are utilized may also be different. I have illustrated that the use of TCSs is at the same time a word order phenomenon which plays an important role in text cohesion. Finally, I described the manner of θ-role assignment which has been adopted by the present study and how Chinese and English use different syntactic structures to express the same conceptual structures.

Given that Chinese and English have different syntactic means to express meaning, and some Chinese TCSs do not exist in English, the Chinese TCSs will have to be acquired by L2 learners. In the learning process, L1 influence may occur. This leads to the discussion of the issues in the next chapter, i.e., the issues related to second language acquisition.

CHAPTER THREE
Related Issues in Second Language Acquisition

3.0. Introduction

The field of SLA is an important area in linguistics. Starting from the contrastive analyses in 50's, studies in this area have provided insightful data in language development, language universals, the nature of grammatical and communicative competence, and the acquisition of these linguistic abilities. All these aspects are central to linguistic investigation and have to be considered by linguistic theories. Therefore, we can say with confidence that research in SLA has not only made important contributions to the study of language, but also presented challenges to a deeper understanding of human language (Ferguson, 1992).

The field of SLA, however, is also a distinct sub-area in linguistics due to the unique nature and characteristics of L2 learning. Through the years of study, researchers in this area have accumulated a body of empirical data to help them focus on some very important aspects of L2 learning, for example, the nature of second language systems, learning processes, the constraints and strategies used in learning, and the interacting factors involved in SLA. These specific foci have made SLA a separate subdiscipline within linguistics that has its own type of data, its own theories and its own research methodologies (Selinker, 1992).

Since the present study investigates the L2 acquisition of TCSs in Chinese, it concerns the development of an interlanguage system and interlanguage knowledge over time. Therefore, in this chapter, I will discuss some issues in SLA that are related to the present research. First of all, I will present my view on the nature of SLA, especially in relation to the acquisition of TCSs in Chinese. The discussion will start with a definition of the term "interlanguage", followed by a discussion of the

nature of interlanguage knowledge in section 3.1. I will argue that, even though interlanguages share some characteristics with natural languages, interlanguage knowledge is both quantitatively and qualitatively different from the knowledge of native speakers. One of the differences I will discuss in relation to the present study in particular is that L2 learners of Chinese make significantly more errors in word order than L1 acquirers. Since word order of Chinese is to a large extent related to topic-prominence and the use of TCSs, word order errors in the L2 acquisition of Chinese by English speakers is closely related to the typological differences between Chinese and English, the influence of subject-prominence of learners' L1 and the lack of knowledge of TCSs in Chinese.

Since the experiments in the present study investigate learners' metalinguistic performance as a measure of their L2 competence, I will, in section 3.2, discuss the distinction between linguistic competence and linguistic performance in the context of the problems that SLA research has to solve when hypothesizing about L2 learners' competence by observing their performance. This section will also include a discussion of the different types of skills and abilities required in metalinguistic performance, as well as a survey of the critique of the use of metalinguistic data in SLA research.

I suspect that a large percentage of the errors made by subjects in the present study may be due to (or at least related to) the influence of their L1. This is because L1 influence has been found not only to be an important factor in the acquisition of L2 syntax, but also a "major factor at the level of discourse" (Ellis, 1994, p. 316). Therefore, section 3.3 will be devoted to a discussion of the role of L1 influence in SLA. It will be shown that the analysis of L1 influence has greatly stimulated interlanguage research in pursuing an understanding of learning difficulties.

In section 3.4, the last section of this chapter, two different claims on the use of TCSs in language development research will be presented. This will leave a question for the present study to answer.

3.1. The Nature of Interlanguage Knowledge

The Interlanguage Hypothesis was proposed by Selinker (1972). It postulates that SLA is a process in which the learners construct a succession of interim grammars over time in their attempt to learn an L2. These interlocking grammatical systems are not only distinct from both the learner's native language (NL) and the target language (TL) in learning, but also partially overlap with them. Such a grammar or language system at a single point of time is called an "interlanguage" (IL).

Studies of the nature of ILs have found that IL systems share some important characteristics with natural languages.[29] Some of these characteristics have been discussed in the literature. For example, ILs are systematic with internal structures analyzable by means of standard techniques in linguistic research (Huebner, 1985; Larsen-Freeman & Long, 1991; Selinker, 1988); they are variable according to different linguistic contexts (Adamson, 1988; Gass, Madden, Preston and Selinker, 1989; Huebner, 1985) and sociolinguistic situations (Beebe, 1980; Tarone, 1979, 1983); they obey the constraints of language universals (Rutherford, 1984; Schmidt, 1980; White, 1989); and they exhibit common patterns of acquisition order and developmental sequence (Larsen-Freeman & Long, 1991).

Despite all these commonly discussed similarities, there is still reason to believe that IL knowledge is different from the knowledge of a native language. In the following, I will argue that IL knowledge is both quantitatively and qualitatively different from L1 knowledge.

The quantitative differences between IL knowledge and L1 knowledge is obvious. Since IL systems are not the final state of knowledge, L2 learners have not fully acquired the target language knowledge yet. Their

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[29] The term "natural languages" refers to the languages that are acquired as L1s through childhood in a natural environment.

knowledge changes drastically over time as the result of learning (Adamson, 1988; Adjemian, 1976).

Support for qualitative differences between IL and L1 comes in part from the observation that native speakers' knowledge and L2 learners' knowledge differ in confidence level. Native speakers, on the one hand, are usually more confident of their linguistic knowledge, even though individual differences do exist. L2 learners' confidence of their knowledge, on the other hand, shows greater degrees of variability. This can be seen in the guessing phenomena (or strategy) often observed in L2 behavior. As the result, the performance of L2 learners is more variable. Even when a structure has been "acquired" (or considered to be so), learners' performance on the structure may still vary from time to time. Actually, for L2 learners, there are no clear cut-off lines between structures that are "acquired" and those that are "not quite acquired". Most of the differences correspond to different degrees of confidence.

Compared to L1 knowledge which is rather automatic and subconscious, L2 knowledge is more rationalized and consciously available to the learners. Sometimes, L2 knowledge is accessible only through reference to L1. Take TCSs in Chinese for example. In L1 production, the use of TCSs is automatic. Chinese L1 speakers do not even know what structures they are using; they do not remember learning these structures consciously either. L2 production is different, especially when the proficiency level is low and the learners' L1 is not topic-prominent. These learners are not used to planning their utterances with primary focus on topic and comment. Their discourse planning is influenced by the characteristics of their L1. Even when they have acquired some TCSs, their production may not be automatic. For example, to express the meaning "I do not have enough money", beginner level learners whose L1 is English almost always produce sentences such as (3.1) or (3.2), instead of (3.3) which is the appropriate form[30]:

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[30] These examples were taken from the translation exercises of my students.

(3.1) Wo meiyou gou de qian.
I not have enough MOD money

(3.2) Wo you bu gou de qian.
I have not enough MOD money

(3.3) Wode qian bu gou.
my money not enough

Sentences in (3.1) and (3.2) are similar to English sentence structure. Although they are grammatical in Chinese, native speakers would never produce such sentences (Liu, 1996). This is due to the fact that the focus of the sentence is not on whether "I" have money or not, but on whether the money "I" have is enough. A Chinese sentence for this has to use *wode qian* 'my money' as the topic, followed by an adjectival comment *bu gou* 'not enough'. In English, "My money is not enough" is an alternative way of expressing the same meaning, but this structure is used much less frequently than in Chinese. It seems that, for such sentences, English favors the use of a human NP (e.g., "I") at the beginning of a sentence (i.e., more of a subject), while in Chinese, a non-human NP (e.g., *wode qian* 'my money') has to be used to start the sentence (i.e., more of a topic). Some L2 speakers reported that they had to apply psychological conversion from the English structure in order to produce the correct topic-comment form in Chinese[31].

Now, consider another fact that can be taken as evidence for the qualitative difference between IL and L1 knowledge. That is, L1 knowledge, as final state knowledge, includes not only the knowledge of the grammaticality of structures, but also the knowledge of how grammatical structures are used in appropriate situations. The former constitutes "grammatical competence" and the latter, "communicative competence" (Kramsch, 1981)[32]. Using functional terms, native speakers' linguistic knowledge includes both the form and the function of linguistic structures. Studies in SLA have also shown that knowing the correct forms and

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31 This is based on personal communication with some students.

32 Also see the next section for further explanation of these terms.

knowing the functions of these forms are different types of knowledge. These two types of knowledge are acquired separately. Some learners acquire forms before functions, some do it in the reverse order (Hatch, 1984; Kramsch, 1981). For example, if an L2 is learned through classroom instruction in which emphasis is put on the learners' grammatical competence rather than their communicative competence, the learners may learn grammatical structures without knowing how to use these structures in real communicative situations.

Actually, in the research on L2 learning in classroom setting and instructional pedagogy, the issue of the acquisition of grammatical competence without the acquisition of communicative competence has long been known to SLA researchers and instructors. It was the very reason for the birth of the so-called "communicative approach" in language teaching. In the area of SLA, it has also become common wisdom that the acquisition of linguistic forms should be considered and investigated together with the acquisition of the functions of those forms as well as how form-function relations might change during the acquisition process. Otherwise, the research may fail to capture critical observations of interlanguage phenomena (Tomlin, 1990). As the result of such recognition, the premise of communicative use as a necessary condition for successful language acquisition now underlies most of SLA studies (also see Fuller & Gundel, 1987; Huebner, 1983; Jordens, 1980; Tomlin, 1984, 1987).

Since the knowledge of form is different from the knowledge of function, as has been discussed earlier in this section, these two types of knowledge can be measured separately in linguistic experiments. In SLA studies, different methodologies have been used to measure learner competence and proficiency levels. In the following section, I will turn to some methodological issues regarding measurement of IL knowledge in SLA research.

3.2. The Measurement of Interlanguage Knowledge

3.2.1. Competence vs. Performance

In the analysis of linguistic knowledge, a distinction is made between linguistic **competence,** which is defined as the speaker-hearer's underlying knowledge of his language, and linguistic **performance**, which is "the actual use of language in concrete situations" (Chomsky, 1965, 1986; Jackendoff, 1990).

Different researchers have different conceptions on what counts as competence. To some people, especially those who work within formal theoretical frameworks, linguistic competence refers to the internal knowledge of a speaker as to the grammatical structures of the language he/she speaks (i.e., the knowledge of form, or **grammatical competence**). To others who are involved in more applied research, the notion of linguistic competence often includes how these structures are used in communication (i.e., the knowledge of function, or **communicative competence**[33]). For the functional approach which puts an emphasis on the communicative function of language, the concepts of competence must include specification of how knowledge representations are put to principled use in discourse interaction. This, as Tomlin (1990, p. 162) points out, makes functional analyses "natural allies of SLA study because they focus on the central concerns of linguistic research - knowledge implementation and its relation to acquisition and representation - which must be described and explained if SLA is to be understood fully" (cf. Bates and MacWhinney 1982).

Since studies in SLA are mainly interested in how L2 learners' competence develops over time, there is always a potential problem: the learners' internal knowledge is not open for inspection and has to be examined through the learners' performance. Linguistic performance, therefore, is used as evidence for linguistic competence. However,

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33 Another term for "communicative competence" is "pragmatic competence". Please refer to Ellis (1994, p. 437-438) for an explanation of these terms and the research conducted.

performance is by no means a direct reflection of competence. If, for example, a learner is asked to perform on an oral test, his/her performance may be affected by a large number of factors such as the test setting, his/her mood on that particular day, the nature and design of the task, personality and personal preferences, performance strategies and so on. Thus, the observation of competence through performance is always obscured by such performance factors. This leads to an underlying problem for SLA experiments, i.e., the problem of confounding factors. Every SLA experiment that aims at accessing competence must address the question of to what extent learners' competence can be inferred from their performance and how performance factors can be controlled as much as possible in empirical studies (Ellis, 1986).

3.2.2. Metalinguistic Performance of L2 Learners

Metalinguistic performance refers to language activities that aim to discover the internal linguistic knowledge of the performers. These activities are specially designed and are not associated with casual everyday language use. In SLA research, metalinguistic activities, e.g., judgment tests, multiple choice exercises and correcting errors, are often used to examine learners' L2 knowledge. Especially since the early 1980s, metalinguistic activities have become an increasingly important source of data for L2 research (Ellis, 1991, 1994).

To many researchers, using metalinguistic data has obvious advantages. First of all, it has been argued that metalinguistic performance is a relatively easy way of obtaining linguistic data. It offers a relatively direct window onto the learners' grammatical competence, because metalinguistic performance does not cause as much difficulty as production performance and, thus, involves fewer performance factors (Arther, 1980; Bley-Vroman, et al, 1988; Kellerman, 1986; Masny & d'Anglejan, 1985; Schachter, 1989; White, 1989).

The second reason for the use of metalinguistic judgment data is also a practical one. It has been observed that, due to various structural or

nonlinguistic reasons, some linguistic phenomena are not accessible to investigation by using production data. If, for example, the researchers only use conversational data, the learners may select their use of forms and structures from those they are most confident in, producing a bias in the data. The sample obtained in this manner is only what the learners choose to show, not what the researchers decide to discover. This is exactly what is revealed in Schachter's (1974) experiment. This experiment investigated the acquisition of English relative clauses in a production task. One group of subjects were speakers of Persian and Arabic, in which relative clauses are put after the nouns they modify, the same as in English. The other group of subjects spoke Chinese and Japanese, in which relative clauses are put before the nouns they modify. The results of the experiment showed that Chinese and Japanese learners made fewer errors in their production of relative clauses than speakers of Persian and Arabic. However, in the analysis, attention was drawn to the fact that the Chinese and Japanese learners had more difficulties with relative clauses because of the structural differences between their L1 and L2. Due to the difficulty, relative clauses were avoided in their production as much as possible, resulting in the smaller number of errors (See Dagut & Laufer, 1985; Hulstijn & Marchena, 1989; Kellerman, 1977; Kleinmann, 1978, Laufer & Eliasson, 1992; for later studies of avoidance phenomena).

Following such observations, it was realized that using data from metalinguistic performance may allow the researchers to correct sampling bias and to elicit information about the learners' interlanguage which they are not required to reveal in production tasks. Thus, even though it is acknowledged that research data would ideally come from natural production, researchers in the field still choose to elicit metalinguistic data in order to assemble a relevant corpus (Ellis, 1991, 1994; Selinker, 1992, p. 160).

In recent years, however, the theoretical assumption that metalinguistic performance is a reflection of linguistic competence has been called into question. The use of metalinguistic data, especially the use

of grammaticality judgment, has become the subject of extensive debate (Birdsong, 1989; Ellis, 1991; Hedgcock, 1993).

The first argument against using grammaticality judgments is that since any performance is contaminated by performance factors, there is no clear evidence to show that grammaticality judgments are less contaminated than production tasks. It is not clear to what extent grammaticality judgments are free of performance constraints (Lasnik, 1981). Learners, in order to carry out the tasks, may bring in a variety of test-performing strategies, e.g., guessing and balancing the number between positive and negative answers. These strategies produce noise for the data (Ellis, 1991, p. 164; Birdsong, 1989).

Secondly, it has been pointed out that researchers using grammaticality judgments have not been successful in showing clearly on what the subjects' judgments are based and what processes and factors are involved in making the judgments. It is quite possible that the subjects' judgments are not made on the structures under investigation, but on other things such as whether a sentence is stylistically marginal, semantically anomalous, or whether a sentence is hard to parse because of syntactic complexity (Schachter, 1989; Schachter and Yip, 1990).

This criticism is enhanced by the results from several experiments which indicate that a) results from grammaticality judgments are incompatible with results from production data (Gass, 1983; Tarone & Parrish, 1985); and b) subjects' performance for judgment tasks is not necessarily better than their performance for production tasks. Liceras (1985), for example, studied the acquisition of relative pronouns by L2 Spanish learners at beginning level. It was found that the subjects in general obtained very low scores on judgment tasks (23% correct) compared to their scores for translation and blank-filling tasks (86% and 73% respectively). These results suggest that "for beginning learners, at least, judging the grammaticality of sentences and producing L2 structures constitute different and unrelated types of behavior" (Ellis, 1991). Consequently, it has been claimed to be essential to analyze judgment data

in terms of what kinds of linguistic, metalinguistic and cognitive behaviors are involved in making the judgments (Birdsong, 1989; Schachter & Yip, 1990).

Thirdly, researchers have observed that judgment data display enormous within-subject variation (Kellerman, 1985; Nagata, 1988, 1989). This makes it even more difficult to characterize subjects' competence. For example, Ellis (1991) reports on a study of Chinese ESL learners' judgments on dative alternations and a follow-up test a week later using the same subjects and the same test stimuli. The results indicate that the subjects were inconsistent in 22.5% of their judgments, and that their judgments were based on a variety of strategies. Other studies have also observed that subjects generally judge ungrammatical structures more accurately than they judge grammatical structures (Ellis, 1991; Hedgcock, 1993). This may due to a) the saliency of some deviant forms (Felix, 1988); b) the tendency in some subjects to "reject when uncertain" (Bley-Vronman et al. 1988); and c) the subjects' familiarity with the deviant structures due to explicit instruction and overt correction (Ellis, 1991; Hedgcock, 1993). Although such explanations reveal the unstable nature of L2 knowledge, the subject-internal variation and the linguistic and cognitive factors contributed to it, the problem of accessing competence through judgment data remains. Ellis (1994) concludes that "Metalingual judgments involve 'performance' as much as natural language use, albeit of a different kind. There is no direct window to competence".

In order to find out what judgment data reveal about SLA, some research has been carried out in the last few years to investigate the mental processes and skills required in metalinguistic performance. Ellis (1991), for example, provides a taxonomy of the task-specific features related to different types of metalinguistic activities.

Some similar work has been done by Bialystok (1984) and Bialystok & Ryan (1985). They demonstrate that language activities are related mainly to two types of cognitive skills. The first is the skill to use analyzed knowledge. This refers to the extent to which the learner is able to explain

linguistic structures explicitly along with their content, to manipulate them in the course of solving communication problems, and to apply linguistic generalizations to similar situations (also see Odlin, 1986). Unanalyzed knowledge only has representations of meaning, while analyzed knowledge also codes the relationship between meaning and its form. The second skill related to language activities is the skill in cognitive control, which is commonly seen as a performance factor in SLA research. It refers specifically to learners' abilities to focus deliberately on the relevant aspects of a problem and retrieve information in an effective way. In language use, cognitive control is reflected in learners' abilities to manipulate information from sources other than TL structures, e.g., incorporating context, information processing strategies, knowledge from L1 and other knowledge sources.

Bialystok and Ryan (1985) demonstrate that different types of language activities require different types of knowledge and different degrees of cognitive control. These two types of skills can be represented on two axes. The intersection of the two axes and the abilities different types of activities require are shown in Figure 3.1 below:

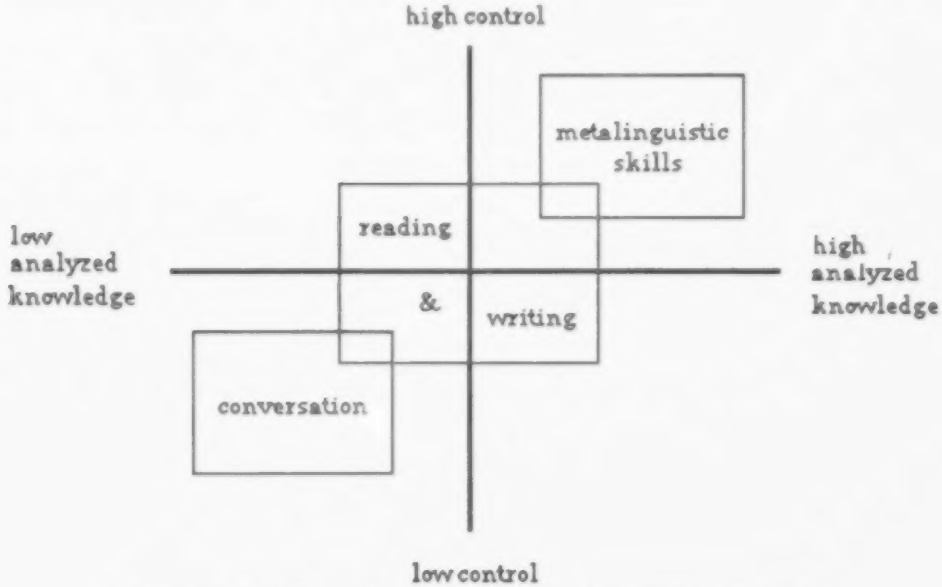

Figure 3.1: Knowledge Types vs. Degrees of Control
(Bialystok and Ryan, 1985)

The dimensions of cognitive control and analyzed knowledge, as shown in Figure 3.1, are orthogonal. Thus, control processes are responsible for retrieving knowledge, whether analyzed or unanalyzed. The development of the control mechanism proceeds separately and in response to the development of analyzed knowledge (Birdsong, 1989).

According to the above model, some linguistic activities, e.g., metalinguistic performance, are more difficult than others due to their higher requirements on analyzed knowledge and cognitive control. In addition, metalinguistic activities may also require the linguistic knowledge that has not been fully acquired by the learner. This, of course, increases the demands on the part of the learner and makes the task even more difficult than activities such as daily conversation.

In spite of the questions raised, however, metalinguistic performance remains an important source of data for SLA research. Discussions in recent years on the use of metalinguistic data have resulted in a general recognition that metalinguistic performance, with all its advantages in research, is also affected by performance variables such as mode of presentation, order of presentation, providing of context, generalizability of data, balancing of test items, types of response required, complexity of the test stimuli, types of the forms the subjects are instructed to identify, the level of saliency of these forms, and so on (Birdsong, 1989). These factors make it very important for experiments using metalinguistic data to control secondary variables.

Since the types of metalinguistic tasks vary considerably with respect to the structures tested, experimental design and analytical methods, little is known so far as to what exactly constitutes a test that would yield the most reliable and valid results. Studies reveal that many problems with using metalinguistic data are related to the specific features of the particular tasks, such as the ones mentioned above. These features can be improved by careful experimental design.

Due to the extensive investigation and discussion on the use of judgment data in empirical research, it has been realized that the control of secondary variables is also a very important issue for the present study. This issue will be further discussed in Chapter Four when the experimental design of the present study is laid out.

Next, I will turn to a discussion of an important factor affecting SLA, i.e., the influence of the learners' L1 in the learning of an L2.

3.3. L1 Influence in Second Language Acquisition

Since the postulation of the IL Hypothesis (Selinker, 1972), research in SLA has identified a number of factors involved in the creation of IL systems, such as L1 influence, language universals (Flynn, 1987, 1989; Gass, 1979, 1989; Liceras, 1989; Schachter, 1989; White, 1989), classroom instruction (Chaudron, 1988; Edmondson, 1985; Pica, 1983; Wildner-Bassett, 1990), perceptual salience (Bardovi-Harlig, 1987; Davison, 1984), construction length (Anderson, 1978) and frequency of occurrence (Larsen-Freeman, 1978, Ringbom, 1987). Some of these factors, e.g. L1 influence and classroom instruction, make L2 learning different from L1 acquisition.

Among the factors affecting SLA, the role of L1 influence has been of primary concern. The research and the large amount of literature written in this area has resulted in a wide recognition of the phenomenon of transfer and its important role in L2 learning (Gass & Selinker, 1983; Kellerman & Sharwood Smith, 1986; Ringbom, 1987, 1990; Selinker, 1988, 1992 among others). Even though, for some time, interest in SLA shifted to other issues, the important role of L1 has never been far from the centre of research. Especially in recent years, the issue has been investigated with renewed vigor and broader perspectives.

The study of L1 influence in SLA was initiated in 50's by Fries (1945) and Lado (1957) due to their concerns in foreign language teaching. Fries and Lado held that, in learning an L2, the learners constantly use their

knowledge from their L1. Therefore, in order to equip L2 teaching with the most efficient materials, a contrastive analysis of the learners' NL and TL should be conducted. The similarities identified between the two languages would facilitate L2 learning and, thus, be the sources of "positive transfer", while the differences between the two languages may cause difficulties and would thus be the sources of "negative transfer". Consequently, it was claimed that difficulties in SLA could be predicted by contrastive analysis: The areas that are different between the NL and the TL will be difficult, while the areas that are the same will not. (Corder, 1979; Ellis, 1994; Færch & Kasper, 1986; Selinker, 1969, 1992; and works cited therein).

The claims made by Fries and Lado's contrastive analysis approach were seriously challenged later by the morpheme studies carried out by Dulay & Burt (1972, 1973, 1974). These studies observed L2 acquisition of morphemes and analyzed learner errors. The results showed that a) the errors made in L2 production could not always be traced to crosslinguistic differences; b) the errors that did occur could not always be predicted by contrastive analysis; and c) there are striking similarities between errors in L1 and L2 acquisition which put doubts on the significance of L1 influence and contrastive analysis. Morpheme studies and the subsequent error analysis were conducted when transformational-generative grammar began to predominate in theoretical linguistics. Researchers in SLA began to emphasize the creative aspect in both language production and language learning, moving their attention to the universals that underlie all languages as well as to the active participation of the learner in the acquisition process. Some researchers even denied the existence of L1 influence entirely in their enthusiasm for universal explanations (the so-called "baby and bath-water syndrome") (cf. Odlin, 1989; Ringbom, 1987 for detailed discussion).

In recent years, with increasing research findings on IL knowledge and more and more studies which show consistent L1 influence of some sort in L2 learning process, a more balanced view has been adopted on the role of L1 in SLA. It has been widely accepted that transfer is not an all-or-nothing phenomenon. On the one hand, empirical evidence shows that L1

influence on the learning of an L2 is very substantial. On the other hand, it has also been pointed out that L2 learners do not transfer all the structures in their L1 into L2. Instead, language transfer is a selective process (Selinker, 1992, p. 207). Some L1 structures and processes are more likely to be transferred than others because, in L2 learning, L1 knowledge intersects in a selective way with other types of knowledge (e.g., knowledge from a third language and universal grammatical knowledge of various sorts) when building an L2. Language transfer also interacts with other linguistic factors (e.g., input in TL, frequency of the structure in NL and markedness) as well as extralinguistic factors (e.g., cultural, social, personal and cognitive factors in language use) (Kohn 1986; Odlin, 1989). L1 influence is only one, yet important, factor that works together with other factors. Research in recent years has centered on questions such as the function of these different factors and exactly when, how and to what extent they influence SLA (Andersen, 1983; Gass, 1979, 1984; Gass & Selinker, 1983; Selinker, 1984, 1992).

Recently, L1 influence has also been studied from a broader perspective. Ringbom (1987) points out that early transfer studies took an over-simplified view of L1 influence, focusing only on negative transfer and transfer of syntax and looking only at learners' production. In fact, cross-linguistic similarity plays a more important role, because the learners always try to facilitate their task by making use of their L1 knowledge. When they do so, cross-linguistic similarity (rather than differences) helps them in comprehension and production. Such a positive influence is even more substantial, although less easily identified, than the so-called "negative transfer". In early stages of SLA, learners may also set their L1 structures as the default value. Therefore, cross-linguistic influence should mainly facilitate L2 learning.

Research in recent years has also found that the analysis of L1 influence can be done on three different levels. The first level is the structural differences between L1 and L2 which provide "transfer potential". This is where early contrastive studies focused on. The second level is the error types as the product of transfer, which shows the "transfer

pattern". This level is the centre of research for the error analysis approach. The third level, which is cognitive in nature, treats transfer as a process in which the learners' knowledge from different sources (L1, L2 and other knowledge) is combined and coordinated to serve communicative purposes (Kohn, 1986). This analysis opens up the interpretation of L1 influence towards cognitive dimensions such as levels of consciousness and the presence and absence of conscious control in transfer (Kellerman, 1978; Sajavaara, 1986; Sharwood Smith, 1979).

Consequently, the structural differences or congruence between L1 and L2 are no longer enough to predict transfer. Other cognitive factors, such as the learners' perception of the distance between their L1 and L2 and the degree of markedness of the structures are also claimed to play parts in the determination of whether transfer will occur (Bardovi-Harlig, 1987; Jordens, 1977; Kellerman, 1977, 1979, 1983; Rutherford, 1982). An L2 perceived as close to the learner's L1 will boost the likelihood of transfer; L1 structures and characteristics that are perceived as marked, e.g. idioms, will depress transfer. Other studies have also shown that transfer is more likely to happen when L1 and L2 structures are similar, but not exactly the same, because L2 learners may perceive them as identical (Andersen, 1983; Ard & Homburg, 1983). When all these different factors are taken into account, language transfer seems to be predictable only in a probabilistic sense.

3.4. TCSs in Language Development

The study of language development, like any other field in linguistics, has consistently enlarged the scope of its investigation. Developing from the classical area of L1 acquisition, the research has been greatly enriched by more recent studies in L2 acquisition. From collective research, evidence has been accumulated for the claims that a) learner languages in both L1 and L2 involve processes of change over time which give rise to special transitional structures; and b) among the transitional

structures, there is an implicational hierarchy of structures through which most learners pass (Adamson, 1988; Greenberg, 1991).

In both L1 and L2 acquisition, researchers have observed that utterances at early stages of acquisition are basically topic-comment in nature. Syntactic features are gradually acquired later. For example, in L1 acquisition, it has been observed that English-speaking children on two-word stage (i.e., the first stage in which words are combined) produce utterances such as "Mommy here" and "Daddy go". These utterances only have loose pragmatic relations between words without the morphological and syntactic characteristics observed in adult grammar. The explanation provided is that, by such utterances, children at this stage establish a topic first and then provide information on some aspect of the topic (Gruber, 1967; Owens, 1988)[34].

Another characteristic supporting the topic-comment analysis is that, at the two-word stage, children's initial use of "topic" is restricted to human and animate nouns only (de Villiers & de Villiers, 1978). These two types of nouns are typical topics ranked on the upper end of the topicality hierarchy[35]. At two-word stage, very few nonagentive nouns appear in preverbal position. Thus, it is even hypothesized that the children may not have developed the abstract notion of subject yet (Bowerman, 1973).

For later stages of L1 development, Gruber (1967) also noted that an English-speaking child produced utterances with topic either preceding or following a comment with full clause structure, shown in (3.4). These

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34 However, two-word utterances can also have different stress patterns which may reveal different syntactic structures.

35 In the research on topics, it has been observed crosslinguistically that not all NPs are equally likely to be selected as topics (Hawkinson & Hyman, 1974; Givón, 1976). A universal implicational hierarchy for topicality of NPs is thus established:

Topicality Hierarchy:
human > animate > inanimate

The implicational hierarchy indicates that a human noun (e.g. "the man" or "the child") is more likely to be selected as a topic than an animate noun (e.g. "the dog" or "the bird") which is, in turn, more likely than an inanimate noun (e.g. "the chair" or "the knife"). This ordering is believed to be independent of syntax.

utterances had partially developed morpho-syntactic characteristics such as plural forms and past tense:

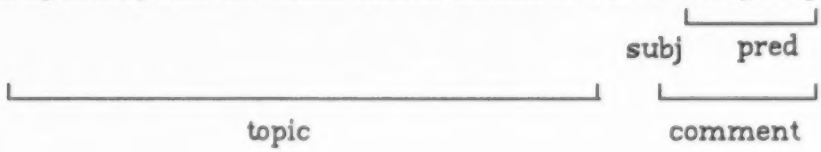
(3.4) a. It broke, wheels.
b. Car, he take the wheels.
c. Where went, the wheels.

Based on his observations, Gruber (1967) proposed that topic-comment form is less complicated than subject-predicate form and, thus, is acquired earlier in the learning process (also cf. Bates, 1976; Fuller & Gundle, 1987).

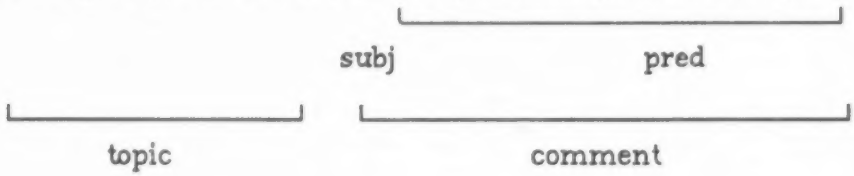
In the L2 acquisition of English as a second language, a general progression has also been observed from topic-prominent structures loosely organized by pragmatic word order towards subject-prominent structures tightly organized by the elaborate use of morphological devices (Huebner, 1985). Rutherford (1983) studied written compositions of Chinese, Japanese and Korean ESL learners and noticed a general development in the learners' production from topic-prominent to subject-prominent, i.e. a gradual increase in the use of English grammatical word order and morphology. In (3.5) below are some examples from Chinese-English interlanguage data in his study:

(3.5) From topic-prominent to subject-prominent (Rutherford, 1983, p. 362)

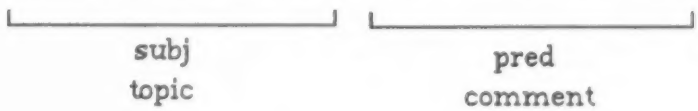
a. In my country man and woman chooses husband or wife 0 is very simple (Level 3)



b. Choose a good husband or wife, this is very important problem for everybody (Level 4)



c. . . . choosing a husband and a wife is one of the essentials of life . . . (Level 5)



Rutherford (1983) claimed that, at the earliest stage (e.g., Level 3 in (3.5a)), the syntactic category of "subject" is not present at all; at the middle stage (e.g., Level 4 in (3.5b)), "subject" is present along with the coreferential topic; and at the last stage (i.e., Level 5 in (3.5c)), topic has been reanalyzed as subject. This sequence, as Rutherford (1983) claimed, represents typical production at three learning stages and "is a particularly clear example of the emergence of syntax from interlanguage discourse". He called this process "syntacticization".

Duff (1988) analyzed written compositions and translation exercises of 608 Chinese middle school students. She also observed a general progress from less syntacticized topic-comment structures to a more syntacticized subject-predicate structure with the increase of proficiency levels of the subjects. The same observation has also been reported by Schachter and Rutherford (1979) and Sasaki (1990).

One thing should be noted for the above studies. The native languages of the subjects participating in these studies belong to two

categories according to Li & Thompson's (1981) typology. Chinese is topic-prominent, but Japanese and Korean are both topic-prominent and subject-prominent. Since all these languages have topic-prominent features, the use of topic-comment structures at the beginning stage of acquisition by these L2 learners could be explained by L1 influence[36]. Such a possibility, however, is excluded by the results from the following studies which examines the production of the learners whose NL is not topic-prominent.

As part of the European Science Foundation Project (Perdue, 1991), a hundred adult immigrants in England, France, the Netherlands, Sweden and West Germany were followed for 30 months by the researchers shortly after their arrival. Their everyday oral conversations with co-workers and interviews were recorded and analyzed as part of a longitudinal research project which aims at restructuring over time the general process of acquisition with respect to the order of acquisition, relative speed and success, characteristics of everyday communication between native and non-native speakers and the factors affecting the acquisition. In the analysis of the general utterance structure, it was found that early stages of acquisition were characterized by general IL features resulting from typical learner strategies, such as using semantically transparent form-meaning relationships and decomposing more complex relations into simpler ones, with considerable variability in the learners' production. Overall systematicity was also observed in that learner language, independent of the structures of any of the source or target languages, was clearly topic-comment in nature. This organization was also carried over into the connected text the learners managed to produce (Klein & Perdue, 1989; Perdue, 1991).

Fuller and Gundel (1987) conducted an experiment using oral narratives of 25 subjects with L1 background in a topic-prominent language (e.g., Chinese), subject-prominent languages (e.g., Arabic, Farsi, Spanish and English), and languages that have both topic-prominent and subject-

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36 But, the question can still be asked why topic-comment structures occur at the beginning stage and the utterances are later more and more subject-prominent, rather than the other direction.

prominent characteristics (e.g., Japanese and Korean). A comparison of the samples between ESL interlanguage and English native speakers' oral narratives found that ESL narrative production, regardless of the learners' background, has more topic-prominent features than the production of English native speakers. Consequently, it has been claimed that there is a topic-comment stage in early interlanguage no matter the L1 of the learner is topic-prominent or not (cf. Givón, 1979; Huebner, 1983).

Based on the findings in L1 and L2 acquisition as well as observations in other types of language development such as pidgins and Creoles, Givon (1979, 1984) summarized a number of highly systematic characteristics in these language types as opposed to adult primary languages. In these two studies, the language types were classified according to the presence or absence of syntactic features such as inflections, articles, markers of tense and aspect, embedding, and nominalization. The results indicated that adult primary languages belong to "syntacticized mode" in which the syntactic features are present. Early child language and early ILs belong to "pre-syntactic mode" which is chronologically prior to the "syntacticized mode", but the syntactic features are absent. The characteristics of the two modes are shown in (3.6) below:

(3.6) Presyntactic Mode vs. Syntactic Mode (Givón (1984):

	Presyntactic mode	Syntacticized mode
a.	topic-comment structure	subject-predicate structure
b.	loose conjunction	tight subordination
c.	slow rate of delivery	fast rate of delivery
d.	pragmatic government of word order	semantic government of word order
e.	low noun/verb ratio within clause	higher noun/verb ratio within clause
f.	scant use of grammatical morphology	extensive use of grammatical morphology

In (3.6), one can see that TCSs, among other things, are utilized in the diachronically earlier pre-syntactic mode of language use before more

advanced syntactic features are acquired. The explanation can be traced to the functional view that the pragmatic need for communication through discourse organization is primary. Therefore, it is expected that structures with functions in discourse organization would be acquired before the development of purely grammatical categories. This also implies that discourse strategies such as the use of topic-comment structure is language neutral (Odlin, 1990, p. 115).

It seems that, by late 80's, the feature of early stage in language development being topic-comment had been well-recognized. However, such a claim is challenged recently by two studies in L2 acquisition.

Xie (1992) is a cross-sectional investigation on the interlanguage of English speakers learning Chinese. It analyzes unplanned discourse data from a story-telling task and compares the production of Chinese language learners with that of Chinese and English native speakers. Five features are chosen to calculate indices of topic-prominence:

1) topicalization (as in 'This book, I read ∅.');
2) zero anaphora (as in 'This book is very difficult. I don't understand ∅; he does not understand ∅ either.');
3) double nominative (as in 'This tree, the leaves are big.');
4) left-dislocation (as in 'Mr. Wang, he went to Beijing yesterday.' in which the pronoun and "Mr Wang" are coreferential) and
5) cleft constructions (as in 'Breaking glass (person) was Xiao Wang.')[37].

Two features, dummy subject and subject-creating constructions, are chosen as features of subject-prominence. The results of the analysis based on these features show that a) the learners' interlanguage at the beginner level is basically <u>not</u> topic-prominent; b) it is at the intermediate level that the learners' interlanguage begins to be different from their native language; and c) the interlanguage becomes more and more topic-prominent as the learners' proficiency improves (Xie, 1992: iv). Since the results "did not support the early topic-comment stage hypothesis in adult

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37 For simplicity, similar sentences in English are given here to illustrate the structure. Please refer to Xie (1992, p. 11-13) for examples in Chinese.

second language acquisition", it is concluded that "the subject-prominent characteristics of English exert an important influence on the process of learning Chinese" to such an extent that it results in "suppression of the pragmatic mode" (ibid: v).

Jin (1989) also examines English-Chinese interlanguage. Among several other findings, she also found that the results of her study contradict the claim for a universal topic-comment stage in IL.

Jin (1989) and Xie (1992) are so far the only two studies reported in the literature that observe the acquisition of topic-comment features in Chinese by English speakers. However, both of them turned out against the topic-comment feature of the early IL claimed by other researchers. Could this be due to the language-specific characteristics of English and/or Chinese (i.e., the learners' L1 and L2)? Or is it because of the methodological differences in the research? In a later section (section 7.2), we will see that different TCSs have different degrees of difficulty due to their various syntactic and semantic characteristics. Treating them as a homogeneous group may not lead to valid claims. This will be further discussed after I present the results of the present study.

3.4. Summary

In this chapter, I have discussed some major issues in SLA that are relevant to the present research. I have shown that although interlanguage has characteristics similar to natural language, its very nature and the factors involved in SLA make interlanguage knowledge both quantitatively and qualitatively different from knowledge of L1. This is especially true when the structure of the L2 is typologically different from the structure of the learners' L1. I have also shown in this chapter that measuring interlanguage competence is a complicated procedure during which the observation of any phenomenon could be a joint function of many factors. Therefore, researchers in SLA have to be very careful in the control of secondary variables when selecting data for their research. For the role

of L1 influence in SLA, I have demonstrated that L1 influence is closely related to learning difficulties. It is also a selective process in which both the differences and the similarities of L1 and L2 are involved. In the last part of this chapter, I reviewed the studies which either support or contradict the claim for a universal topic-comment stage at the beginning level of L2 acquisition. The discussion in this part left some research questions for the present study to answer.

Up to now, I have set up the stage for the empirical aspect of the present research. Therefore, in the next chapter, I will describe and discuss the rationale, the empirical design, the hypotheses, as well as the predictions of the present study.

CHAPTER FOUR
Design of the Empirical study

4.0. Introduction

The claim that Chinese is topic-prominent while English is subject-prominent may have its most practical consequences in second language acquisition. This typology implies that even though both Chinese and English are SVO languages, speakers of one who are learning the other have to learn a language of a different type. In the few studies that observe the acquisition of such typologically different languages, it has been observed that, since Chinese grammatical system is not as rigorous as English, Chinese learners of English go through a process of "syntacticization" to acquire the grammatical rules of English (Rutherford, 1983). But, what happens if the acquisition is in the other direction, i.e., the acquisition of Chinese by English speakers? Since Chinese does not have the type of morphosyntactic rules that English has, what do English speakers have to acquire when they acquire Chinese sentence structures? My answer to this question is that, first of all, word order is very important to Chinese grammar and sentence structure. The variable word order of Chinese always causes difficulty for L2 learners and, thus, is an important part of the acquisition. Secondly, TCSs are very closely related to word order phenomena on the one hand, and distinguish Chinese from English syntax on the other. Therefore, TCSs form an important part of the acquisition task for English-speaking learners of Chinese.

The purpose of the present study is to explore the second language acquisition process of TCSs by speakers of English. In the following sections, I will describe the design of the empirical study. Section 4.1 will discuss the rationale as well as the significance of the study in the field of SLA. Section 4.2 will specify the research questions the study aims to answer. In section 4.3, the TCSs investigated will be classified into 11

categories according to their semantic and syntactic characteristics. Based on this categorization, the hypotheses and the prediction of the study will be stated in section 4.4. The last section in this chapter, section 4.5, will describe the design of the two experiments.

4.1. Rationale of the Empirical Study

So far in the field of linguistics, very little work has been done to investigate the characteristics of TCSs. In the field of SLA, studies observing the acquisition of TCSs are even more rare. The reasons are multifold.

First, in the domain of theoretical analysis, the typology of topic-prominent vs. subject-prominent languages is relatively new, compared to other analytical approaches. Syntactic analysis has so far been conducted mainly on the structures of subject-prominent languages such as English. Many characteristics of topic-prominent languages have not been investigated. Studies in SLA have traditionally followed theoretical analysis in that they either provide evidence for the theoretical analysis or observe the acquisition of the features specified in theoretical analysis as a verification of the theory. Therefore, a delay in theoretical analysis may cause a delay in SLA research.

Secondly, many studies in recent years concerning TCSs have focused on the properties and the functions of topic only, instead of looking at topic and comment together as a unit and investigating its structural and semantic features. The fact that there are different types of TCSs with respect to their semantic and syntactic characteristics has seldom been addressed and investigated. For a topic-prominent language such as Chinese, this is an important area, and yet unexplored.

Thirdly, although there have been many studies of interlanguage on language transfer and language universals, studies in terms of the change in typological features such as topic-prominent and subject-prominent are

very rare. Among the few studies reported, the majority observe the acquisition of English morphological and syntactic rules, since the acquisition of English has been a predominating focus in L2 acquisition research. Considering language specific characteristics, it is reasonable for the acquisition of TCSs not to be a focus in L2 English. But for the acquisition of Chinese, the situation is quite different. As has been discussed before, the use of TCSs is an important feature in both the discourse and the syntactic organization of the Chinese language and, as such, cannot be a peripheral phenomenon. This can be seen in the large variety of topic-comment sentences and their frequent use in the language. Therefore, successful acquisition of Chinese is to a large extent determined by the acquisition of the TCSs in the language. However, the research on the acquisition of TCSs in Chinese is very much under-developed.

In L2 acquisition research, one of the important objectives is to identify the sequence or route of acquisition. For example, studies of the acquisition of English in the direction of "syntacticization" have produced detailed acquisition sequences for English morphological and syntactic structures. Compared to these studies, the acquisition of topic-prominent languages by speakers of subject-prominent languages in the direction of "pragmaticization" has been very much under-studied. It is hoped that the present research will provide a comprehensive view of the process of the acquisition of TCSs in Mandarin Chinese.

As has been noted in the discussion of SLA research above, contradictory claims have been made in the characterization of early interlanguage. One claim is that early interlanguage has the universal feature of being topic-comment (Bates, 1976; Gruber, 1967; Givón, 1979; Fuller & Gundel, 1987); the other is that there is "suppression" of topic-comment features by learners whose L1 is subject-prominent (Jin, 1989; Xie, 1992). In order to obtain a better picture on this issue, more detailed studies are needed in both the analysis of TCSs and how L2 learners acquire these structures.

Based on the above rationale, the present study is designed to investigate the acquisition process of Chinese TCSs by learners whose L1 is English. The use of English speakers as subjects has obvious advantages. Since English and Chinese are two extremes on the scale of subject vs. topic prominence, the acquisition of TCSs in Chinese can be observed to its maximum in English-speakers' acquisition of Chinese. The characteristics of the learning process observed in the present study, including the sequence of acquisition, difficulties encountered, the roles of different factors involved and the strategies applied by the learners, will contribute to our knowledge of SLA.

4.2. Research Questions

The present study addresses two types of questions. The first type concerns the analysis of TCSs. The second type consists of questions about the SLA of TCSs. Together, they are:

a) What are the major types of TCSs?

b) What are the semantic and syntactic characteristics of these types?

c) Are the different types of TCSs acquired together or sequentially?

d) If they are acquired sequentially, what is the sequence of acquisition?

e) If they are acquired sequentially, is this sequence mainly based on the semantic characteristics or the syntactic features of the TCSs?

f) What are the factors (e.g., semantic and syntactic characteristics of the categories, L1 influence, etc.) and their roles in the acquisition process?

g) What are the characteristics at different stages of acquisition?

h) What can be seen in terms of production strategies that the learners apply at different stages of acquisition?

4.3. Categorization of Chinese TCSs under the Present Study

This section aims to answer the first two research questions specified above. As has been mentioned at the beginning of Chapter Two,

topics in Chinese can be designated by various grammatical categories, with different semantic content. In this section, the TCSs investigated by the present study will be described and categorized with respect to their semantic and syntactic characteristics.

4.3.1. Scope of the Empirical Study

Due to the fact that there is a large variety of TCSs in Chinese and that some of them involve juxtaposition of a series of comments, the present study has to limit its scope of inquiry. It is assumed that, in language acquisition, the learners have to acquire simple TCSs before they can combine these TCSs into more complex sentences with "topic chains" (cf. (2.13) and (2.14) in section 2.1.2). Thus, I decided to focus on a limited number of simple structures.

The TCSs investigated in the present study are the ones used in simple declarative sentences in daily conversation, i.e., in an informal register. They could be part of topic chains. The topics are in unmarked form in the sense that they are all designated by noun phrases (Brown and Yule, 1983, p. 127; Davison, 1984; Tsao, 1990). Since various types of NPs differ in markedness and convey different types of information (Chaudron & Parker 1990; Davison, 1984), the topics investigated in this study are limited to full definite NPs. Other types, such as pronouns, zero forms or NPs with complicated modification are avoided. In addition, all the topics studied share the feature that they do not have focal stress. This can be considered as a corollary of the property of topic as being definite, given, and the comment as providing new information about the topic.

Topics covered by the present study are also limited to those which are distinct from the subject of the respective sentences. The so-called "subject topics" (or "topic subjects" in which an NP is both the topic and the subject of the same sentence) represent a different type of notion and have different syntactic functions. For example, they define topicality less strongly than explicit TCSs (Davison, 1984). This limitation is also used to

eliminate the confusion in distinguishing among a pure subject, a pure topic or a "subject topic".

Since the comment part in Chinese sentences also has a large variety, e.g., with only an NP or an AP, with transitive or intransitive verbs, or combinations of the above (cf. (2.13), (2.14) & (2.15) in section 2.1.2), a study at this stage also has to set a limit to the various types of comment investigated. I decided to include comment with at least a verb. When there could be a variation of transitive and intransitive verbs, only transitive verbs are used with direct objects.

With the above specifications, the word order of a sentence with normal structure (i.e., all major constituents are present), is TSVO (cf. section 2.2.1 for the abbreviation). There are two exceptions to this, however. One is Type A3 and the other, B3 (refer to the categorization below), for which only intransitive verbs are possible.

In the following section, the TCSs under the investigation will be categorized according to their semantic characteristics, word order, the distance between the topics and their related elements in comment, the structural complexity involved and the differences and/or similarities in use in English and Chinese. These categories will be used to make hypotheses for the study which will be presented shortly after.

4.3.2. Categorization of TCSs According to the Semantic Characteristics of Topic and Word Order

The TCSs investigated by the present study are categorized according to their semantic characteristics[38]. Five types are distinguished: a) time of

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38 Tsao (1979) proposed a similar categorization. In his work, topics were categorized according to whether they are related to a term (i.e., subject or object) or a non-term (i.e., adverbial time and locative expressions) in the following clauses.

In addition, Tsao (1979) recognized another type of topics, i.e., topics that indicate the relevance of the following clause (e.g., "This matter, I do not agree with you"). Since this type of topic does not bear any relation with any particular element in the following

an event as topic; b) location of an event as topic; c) patient as topic; d) topic semantically related to the agent of the event; and e) topic semantically related to the patient of the event[39].

These five types are exemplified below. Within each type, sentences are further subcategorized by their order of major constituents, using the method specified earlier in section 2.2.1.

Type A: Time of an event as topic[40]

Sentences with temporal NPs as topics can be subcategorized into three classes according to their word order: A1, time of an event as topic with normal clause structure (TSVO); A2, time of an event as topic with missing subject (TVO); and A3, time of an event as topic with subject in postverbal position (TVS). These are exemplified in (4.1) - (4.6).

A1: Time of an event as topic, with normal clause structure (TSVO)

(4.1) Qunian *ta* xie le yiben shu.
last year he write PRT a book
Last year he wrote a book.

(4.2) Shang xingqi *wo* mai le qiche.
last week I buy PRT car
Last week I bought a car.

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clause (e.g., it does not bear any of the major θ-roles), I decided not to include it in the present study.

39 In addition to temporal and locative expressions, there are other types of adverbials, e.g., beneficial, manner, instrumental, etc. These expressions, however, are less likely to occur at the beginning of sentences as topics and, therefore, excluded from the present study.

40 It is still a question whether temporal and locative expressions in sentence-initial position in English are more of scene-setting adverbials while temporal and locative expressions in sentence-initial position in Chinese are more of topics. They may differ in degrees of topicality due to the nature of the languages.

A2: Time of an event as topic, subjectless (TVO)

(4.3) Xia xingqi fang san tian jia.
next week have three day holiday
There are three days holiday next week.

(4.4) Mingtian kai liangge hui.
tomorrow have two meeting
Two meetings will be held tomorrow.

A3: Time of an event as topic, subject in postverbal position (TVS)

(4.5) Zuotian lai le *liangge keren*.
yesterday come PRT two guest
Two people came yesterday.

(4.6) Shangge yue ban zou *sange ren*.
last month move away three people
Three people moved out last month.

One thing that needs to be pointed out here is that category A3 has the subjects in postverbal position. Two conditions have to be met in order for this order to be used. First, the verbs of the sentences have to be either intransitive, e.g., *lai* 'come', *zou* 'left', or state verbs such as *zuo* 'sit', *zhan* 'stand' and *shui* 'sleep'. Second, the subjects have to be indefinite, e.g., with a numeral-classifier before the noun (Li, 1976), as shown in (4.5) and (4.6). In these sentences, the indefinite subject NPs occur in the postverbal position to satisfy the given-new information structure (cf. Prideaux and Baker, 1986, p. 43-45 and the references sited therein).

Type B: Location of an Event as Topic

When used as topic, a locative NP can either stand alone (e.g., (4.12)), or be followed by a position word such as *shang* 'on', *xia* 'under', *li* 'in' and *wai* 'out' as in (4.7)-(4.11). These position words are analyzed as nouns (McCawley, 1992). Thus, a noun and the following position word form a compound noun. The present study treats noun phrases with and

without a position word as one category without considering their different internal structures.

As was the case for Type A, three major subcategories emerge from the word order characteristics of Type B: B1, location of an event as topic with normal clause structure (TSVO); B2, location of an event as topic with missing subject (TVO); and B3, location of an event as topic with subject in postverbal position (TVS). These subcategories are exemplified in (4.7) - (4.12).

B1: Location of event as topic, with normal clause structure (TSVO)

(4.7) Cun li, *renmen* gai le xin fangzi.
village in people build PRT new house(s)
In the village, people built new houses.

(4.8) Men shang, *ta* liu le yige tiaozi.
door on he leave PRT a note
On the door, he left a note.

B2: Location of event as topic, subjectless (TVO)

(4.9) Tushuguan li bu neng chi dongxi.
library in not can eat thing
No one is supposed to eat in a library.

(4.10) Heiban-shang xie le zi.
board on write PRT words
Some words are written on the board.

B3: Location of event as topic, postverbal subject (TVS)

(4.11) Chuang-shang shui le *ren*.
bed on sleep PRT people
Somebody is lying in the bed.

(4.12) Women ban lai le *xin xuesheng* .
we class come PRT new student(s)
Some new students came to our class.

A comparison of the Chinese sentences and their English translations in Type B2 and B3 reveals that, even though the Chinese sentences have locative topics in sentence-initial position, it is more natural for their English translations to use normal sentence order, i.e. without using locatives as topics.

Type C: Patient as topic

Sentences with direct objects as topics are classified into two subcategories, C1 (TSV) and C2 (TV)[41]:

C1: Patient as topic, normal sentence structure (TSV)

(4.13) Ta de mingzi *wo* zhidao.
he MOD name I know
His name, I know. / I know his name.

(4.14) Zheben shu, *wo* kan guo le.
this book I read PRT PRT
This book, I read (before). / I read this book (before).

C2: Patient as topic, subjectless (TV)

(4.15) Ni de yifu xi le.
you MOD clothes wash PRT
Your clothes have been washed.

(4.16) Heiban ca ganjing le.
board rub clean PRT.
The board has been cleaned.

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41 There is one more category, i.e., patient as topic, subject in postverbal position (TVS), as shown by the following examples:

(a) Zhege fangjian neng zhu *wuge ren*. (b) Zhe guo fan neng chi *sange ren*.
this room can live five people this pot rice can eat three people
Five people can stay in this room. This pot of rice is enough for three people.

However, such sentences occur very infrequently in Chinese. In addition, native speakers' judgements of (b) show a great deal of variability. Therefore, this category is excluded from the present study.

In this type of TCSs, all direct objects are in topic position. However, for C1, English native speakers would feel that the SVO order is more natural. For C2, since the structure expresses the meaning of passive, the sentences are usually translated accordingly.

Type D: Topic semantically related to the agent of the event

Topics in this type and the next one, Type E, are the so-called "Chinese type" topics. They are not coreferential with any NP in the rest of the sentences, yet they form a certain semantic relationship with either the agent or the patient of the events. In the following examples, both the topics and the elements related to them are underlined.

D1. Topic related to the agent, normal word order (TSVO)

(4.17) Wode pengyou, *yiban* zai xie shu.
my friends half PROG write book
Half of my friends are writing books.

(4.18) Tade sange haizi, *liangge* mai le fangzi.
his three child two buy PRT house
Two of his three children have bought houses.

In (4.17), the topic *wo de pengyou* 'my friends' is related to the subject *yiban* 'half'. In (4.18), *liangge* 'two' has to be interpreted as *two of his children*. The topics form whole-part relationships with the subjects of the sentences. Therefore, the two underlined parts in each sentence are semantically related. In English, the two related parts cannot be separated.

Type E: Topic semantically related to the patient of the event

E1. Topic related to patient, normal word order (TSVO)

(4.19) Zheben shu *ta* yijing xie le dier zhang
this book he already write PRT second chapter
He has already written the second chapter of this book.

(4.20) Keting *women* huan le ditan.
living-room we change PRT carpet
We changed the carpet in the living-room.

E2. Topic related to patient, subjectless (TVO)

(4.21) Zhejian yifu xi le lingzi.
this shirt wash PRT collar
The collar of this shirt has been washed.

(4.22) Zhepian wenzhang huan le timu.
this article change PRT title
The title of this article is changed.

In Type E, the topics form whole-part relationships with the patients of the events. Note again that, in English, the two related parts can not be separated.

4.3.3. Categorization of TCSs According to the Distance between a Topic and its Related Element in the Comment

Before I analyze the distance between topics and their corresponding elements (lexical or empty) in the comment, I need to summarize briefly the relevant categories I have set up so far.

a) topic related to subject (Type D)
b) temporal expressions as topic (Type A)
c) locatives as topic (Type B)
d) object as topic or topic related to object (Type C & Type E)

(4.23) below illustrates the canonical Chinese word order with all the above elements present in one sentence. Please note that when a temporal expression and a locative expression are both present in a sentence, the temporal must precede the locative.

(4.23)

topic	subject	time	location	verb	object
Zheben shu	Wo	zuotian	zai xuexiao	kan le	yiban.
this book	I	yesterday	at school	read PRT	half

I read half of this book at school yesterday.

From (4.23), we can see that the distance between the topic and the subject is the shortest. The distance from the topic to the temporal expression is the second shortest, to the locative expression is the third, and to the object is the longest.

4.3.4. Categorization of TCSs According to the Different Degrees of Structural Complexity Involved

In TCSs, the association between topics and their corresponding elements in the comment may also involve different degrees of structural complexity. To explain this, let's compare the forms of topics with the forms of the same expressions in comment. The examples below involve the same types of topic specified earlier, i.e., Type A-E.

(4.24) below shows that when a temporal expression is used as topic (as in (4.24a)), it has the same form (i.e., an NP) as when the same expression is used as an adverbial time expression in the comment (as in (4.24b)).

(4.24) a. Zuotian wo kanjian ta.
yesterday I see he
Yesterday I saw him.

b. Wo zuotian kanjian ta.
I yesterday see he.
I saw him yesterday.

This, however, is not true of the locative expressions in (4.25), in which the form of the topic (i.e., an NP as in (4.25a)) is different from the form of the same expression used as an adverbial in the comment (i.e., as a

PP in (4.25b)). Using the NP form in the adverbial position as in (4.25c) is ungrammatical.

(4.25) a. Cun li renmen gai le xin fangzi.
village in people build PRT new house(s)
In the village, people built new houses.

b. Renmen zai cun li gai le xin fangzi.
people at village in build PRT new house(s)
People built new houses in the village.

c.* Renmen cun li gai le xin fangzi.
people village in build PRT new house(s)

Thus, we can see that there is a structural change involved between locatives used as topic and the same locatives used as adverbial. For this reason, Type B is considered to be more complex than Type A.

Another example of such structural complexity concerns a comparison between Type C (i.e., direct object as topic) and Type E (i.e., topic semantically related to object). Although both these types involve the association between the topic and the object in a sentence, the form of the topic in Type C is the same as when the expression is in the object position, as (4.26) shows below:

(4.26) a. Naben shu John kan le.
that book John read PRT
That book John read.

b. John kan le naben shu.
John read PRT that book
John read that book.

Type E, however, is different. When the expression in the topic position in (4.27a) occurs in the comment, it is a modifier of the object noun and has to be followed by the modifier marker DE, as in (4.27b):

(4.27) a. nafeng xin wo kan le diyi ye.
that letter I read PRT first page
That letter I read the first page.

b. Wo kan le nafeng xin de diyi ye.
I read PRT that letter MOD first page
I read that letter's first page. / I read the first page of that letter.

Due to this structural change, Type E is considered more complex than Type C.

4.4. Hypotheses and Predictions

In the last section, the TCSs have been classified into 11 categories according to their different characteristics. The acquisition of these 11 categories are investigated in the present study. In this section, the hypotheses and predictions of the present study will be stated and discussed with regard to these categories.

Table 4.1 below shows a two-way categorization of the 11 TCS categories according to their semantic characteristics and word order. These characteristics, and the others discussed in the previous sections, i.e., the distance between topics and their related elements, the structural complexity involved, as well as whether a particular category has corresponding structure in English, will be used to construct the experimental hypotheses. Further explanation of the table will be provided when I discuss the hypotheses shortly.

Table 4.1: Tabulation of Chinese TCSs According to Their Semantic Characteristics and Word Order

	Type A Topic=time	Type B Topic=location	Type C Topic=patient	Type D T→ subject *	Type E T→ object
TSVO	A1	B1		D1	E1
TSV			C1		
TVO	A2	B2			E2
TVS	A3	B3			
TV			C2		

* Here, "→" reads as "is related to".

The basic hypothesis for this study is that some of the TCS categories will cause more difficulty than others for L2 learners, and that the different degrees of difficulty will be reflected in a sequence of acquisition.

Regarding the cause of the learning difficulties, more specific hypotheses are made according to the semantic characteristics of the TCSs, their syntactic properties, and the differences between the learners' L1 and L2.

4.4.1. Hypothesis Based on the Semantic Characteristics

Hypothesis 1: The order of acquisition of the 11 TCSs will pattern according to the semantic characteristics of the categories.

As can be seen in Table 4.1 above, TCSs are categorized semantically into five types as in (4.28):

(4.28) Semantic Categories of TCSs:

Type A: time of the event as topic
Type B: location of the event as topic
Type C: patient as topic
Type D: topic related to the agent of the event
Type E: topic related to the patient of the event

(4.29) shows the hypothesized order that the acquisition of these types will follow:

(4.29) Acquisition Order of the Semantic Types of the TCSs:

1) Type A & Type B
2) Type C
3) Type D & Type E

The reason for hypothesizing that Type A (e.g., *Last year, he wrote a book.*) and Type B (e.g., *In the village, people built new houses.*) are learned

first is that, when temporal and locative expressions are used as topics, the thematic roles of these topics can be interpreted in a relatively easy manner, i.e., independent of the thematic roles assigned in the following clause. This applies equally to Type A and Type B. Therefore, no difference is expected between these two types in acquisition. In Type C, D and E, the interpretation of the topics as agents or patients depends upon the thematic roles of the corresponding elements of these topics in the following clause.

Type C is expected to be learned earlier than Types D & E because, in a Type C sentence (e.g., *The book, John read.*), the relation between the topic and its related element in the comment (empty position in this case) is direct, i.e., they are coreferential. In a Type D sentence (e.g., *The book, the first page is ripped.*) and a Type E sentence, (e.g., *The book, John read the first page.*), the relation between the topic and the related elements in the comment is indirect, i.e., either whole-part, class-member or possessor-possessee relation (Tsao, 1979). Therefore, it is hypothesized that Type D & E will be more difficult to learn than Type C.

According to this hypothesis, Table 4.2 will be the order of acquisition for the 11 categories:

Table 4.2: Acquisition order of the 11 Categories according to Hypothesis 1 (Semantic Characteristics)

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Order:	1	1	1	1	1	1	7	7	9	9	9

In Table 4.2, the first row indicates the coding representing the 11 categories (cf. Table 4.1). The order of acquisition of these categories is shown by the corresponding numbers in the second row. The categories that are hypothesized to be acquired together are indicated by the same number. Thus, the categories in Type A and Type B which are expected to be acquired first all have the number "1". Since there are 6 categories for these two types, the categories that are acquired next, C1 and C2, are numbered "7", and the last three categories are numbered "9".

4.4.2. Hypotheses Based on the Syntactic Characteristics

Since the syntactic characteristics of the categories can be described with respect to word order, the distance between topic and the related elements and the structural complexity involved, as shown in section 4.3, different hypotheses can be made accordingly.

Hypothesis 2: The order of L2 acquisition of the 11 TCSs will pattern according to the word order of the categories.

This hypothesis claims that word order plays an important role in the acquisition of the TCS categories. Referring to Table 4.1 presented earlier in this chapter, the 11 TCS categories are in the 5 different word orders in (4.30):

(4.30) Word Order of the 11 TCS Categories:

1) TSVO (A1, B1, D1, E1)
2) TSV (C1)
3) TVO (A2, B2, E2)
4) TVS (A3, B3)
5) TV (C2)

It is hypothesized that the acquisition of the categories will proceed in the sequence shown above.

The rationale behind this sequence is that the order of TSVO (e.g., *Yesterday I saw the movie*) corresponds to the canonical word order in Chinese clauses (i.e., SVO). This order would be the easiest to learn because every major constituent is designated by a distinct lexicalized form in its normal position. The identification of the function of these constituents as topic, subject and object is relatively direct and, thus, simple.

For TSV (e.g., *John, I like*), both arguments of the verb are present, but the object is in preverbal position serving as the topic. Some kind of

correspondence, e.g., coreference, has to be set up between the topic and the empty object for the interpretation of the sentence. Therefore, this order is expected to be more difficult than TSVO.

The reason I expect TVO to be easier than TVs is that in TVO (e.g., *Tomorrow, (we/they...) have two meetings*), the subject is missing, and has to be restored by using the information in the context.

In TVS (e.g., *In the bed is sleeping a person.*), the subject is in postverbal position, the identification of which is based on the fact that the usual subject position before the verb is empty and that the verbs in TVS sentences can only be intransitive verbs. Thus, the NP after the verb can only be interpreted as the subject. In addition, another restriction applies to this category, i.e., the subject in postverbal position has to be an indefinite NP. It is expected that these structural requirments and the restriction would cause more difficulties in learning.

The last category TV (e.g., "Your clothes washed.") involves processing operations on more than one element, i.e., the subject is missing and the object is in preverbal position. Therefore, this category is expected to be the last to be acquired.

According to this hypothesis, the order in Table 4.3 will be the order of acquisition for the 11 categories:

Table 4.3: Acquisition order of the 11 Categories according to Hypothesis 2 (Word Order)

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Order:	1	6	9	1	6	9	5	11	1	1	6

Hypothesis 3: The order of L2 acquisition of the 11 TCSs will correlate to the distance between the topics and their related elements (lexical or empty) in the comment.

This hypothesis is based on the rationale that, if a topic has a related element (lexicalized or empty) in the comment, then, in comprehension, the topic is interpreted together with its related element in order to get information on its thematic role. In terms of language processing, once a topic is identified with its corresponding element in the comment (e.g., "this book" and "the first page" as in "This book, I have read the first page"), the processing of the concept is closed. The information is then cleared from short-term memory and passed on to another stage for interpretation or synthesis (Kimball, 1973).

Due to the limited capacity of human memory, more information kept in short-term memory would increase the processing load. Therefore, the shorter the distance between a topic and its corresponding element, the easier the sentence would be to process.

Based on the analysis of the distance between topics and their corresponding elements (cf. section 4.3.3), it is hypothesized that the five TCS types will be acquired in the order in (4.31):

(4.31) Acquisition Order of the TCS Types according to Hypothesis 3 (Distance)

1) Type D (subject as topic)
2) Type A (temporal expressions as topic)
3) Type B (locatives as topic)
4) Type C & Type E (patients as/related to topic)

According to this hypothesis, the order in Table 4.4 will be the order of acquisition for the 11 TCS categories:

Table 4.4: Acquisition order of the 11 Categories according to Hypothesis 3 (Distance)

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Order:	2	2	2	5	5	5	8	8	1	8	8

Hypothesis 4: The order of L2 acquisition of the 11 TCSs will correlate with the different degrees of structural complexity involved.

This hypothesis is based on the analysis of the structural complexity involved in TCS categories discussed in section 4.3.4. It concerns two facts: a) both English and Chinese are SVO languages and, therefore, English speaking learners tend to think that the two languages are similar in terms of word order, and b) English TCSs can be seen as derived by movement. Based on these facts, I assume that, in L2 acquisition, it is easier for English-speaking learners to generate Chinese sentences in the same way as in English, i.e., by making up a sentence in the canonical word order first, and then, deriving TCSs from that. This amounts to saying that the learners apply psychological movement to derive TCSs in Chinese. If this is a valid assumption, different types of movement would involve different degrees of syntactic complexity; more structural complexity would cause more learning difficulties.

For example, as I have demonstrated in (4.25), Type A involves the movement of an entire NP to the topic position, while Type B involves the movement of an NP out of a PP and also the dropping of the preposition *zai*. Therefore, Type B is expected to be more difficult than Type A.

By the same token, although both Type C and Type E involve the movement of an element from object position to TOP position, Types C moves the whole NP to the front (as in (4.26)), while Type E moves part of the modifier phrase to the front and leaves the modified noun behind. It also involves the dropping of the modifier particle *de* (as in (4.27)). Therefore, Type E is expected to be more difficult than Type C.

According to this hypothesis, the order in Table 4.5 will be the order of acquisition for the 11 categories:

Table 4.5: Acquisition order of the 11 Categories according to Hypothesis 4 (Structural Complexity)

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Order:	1	1	1	6	6	6	1	1	6	6	6

4.4.3. Hypothesis Based on the Differences between L1 and L2

Hypothesis 5: L2 acquisition of the 11 TCSs will show a major influence from the similarities and differences between the learners' L1 and L2 structures.

This hypothesis assumes that the structures that are exactly the same in English and Chinese would be the easiest to learn. These are categories A1 and C1 (cf. examples below). The structures that are similar in the two languages (i.e., B1, E2) involve minor differences such as the use of function words. They may not cause much difficulty in comprehension and production. The most difficult structures would be those that are completely different in the two languages (i.e., A2, B2, D1, E1, B3, A3 and C2). When learning the last group, the learners cannot refer to their L1 knowledge.

Exemplified below are the 11 categories, using Chinese word order but English vocabulary. It is hoped that this will be illustrative of the differences between Chinese and English in terms of sentence structure. The English meaning of each sentence is provided in the bracket after the sentence. These 11 categories have been put into three groups, arranged from the most acceptable to the least, as shown in (4.31) below. The acceptability has been tested with English native speakers.

(4.31) Acceptability of the 11 TCS Categories in English

A1. Yesterday I saw him. (I saw him yesterday.)
C1. John, I like. (I like John.)

B1. Village in people built new houses.
(In the village people built new houses.)
E2. The article changed title.
(The title of the article has been changed.)

D1. My friends, most are doing business.
(Most of my friends are doing business.)
E1. That room we changed carpet.
(We changed the carpet of that room.)
B3. Our class came a new student.
(A new student came to our class.)
A3. Yesterday came two strangers.
(Two strangers came yesterday.)
C2. Clothes washed. (The clothes have been washed.)
A2. Yesterday held two meeting.
(Two meetings were held yesterday.)
B2. Board on wrote words.
(There are words written on the board.)

According to this hypothesis, the order in Table 4.6 will be the order of acquisition for the 11 categories:

Table 4.6: Acquisition order of the 11 Categories according to Hypothesis 5 (L1 vs. L2)

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Order:	1	5	5	3	5	5	1	5	5	5	3

The 5 different acquisition orders according to the 5 hypotheses illustrated in tables 4.2-4.6 are now put together in Table 4.7 for a comparison:

Table 4.7: Orders of the Acquisition - Comparison of the Five Hypotheses

	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
H1: semantics	1	1	1	1	1	1	7	7	9	9	9
H2: word order	1	6	9	1	6	9	5	11	1	1	6
H3: distance	2	2	2	5	5	5	8	8	1	8	8
H4: Stru. Comp	1	1	1	6	6	6	1	1	6	6	6
H5: L1 vs. L2	1	5	5	3	5	5	1	5	5	5	3

As we can see from Table 4.7, the orders according to the 5 hypotheses are quite different from each other. For example, the category C2 is expected to be acquired first by Hypothesis 4 (according to structural complexity), but is expected to be acquired last by Hypothesis 2 (according to word order).

Prediction: I predict that the semantic characteristics of the TCS categories (Hypothesis 1) and the influence from the L1 of the learners (Hypothesis 5) will play major roles in the acquisition of TCSs. The other 3 hypotheses concern the syntactic characteristics of the TCSs which are actually quite simple. Therefore, they only play minor roles.

Null-hypothesis: There is no difference in the order of acquisition among the 11 TCS categories. All these categories are learned in no predictable order.

4.5. Summary

In this chapter, I have presented the details of the experimental design. I have stated the rationale and the scope of the study; I have also specified the research questions the study aims to answer. The TCSs covered by the study has been categorized into 11 categories according to which the hypotheses and predictions have been made.

This leads to the content of the next two chapters, i.e., the execution of the experiments that test which hypotheses account best for the performance of the learners of Chinese as a second language.

CHAPTER FIVE
Experiment 1 - Judgment Task

5.0. Introduction

As has been stated before, the basic claim of the study is that TCSs are structurally different. The difference causes different degrees of difficulty in learning. The major purpose of the empirical study, therefore, is to address the question of whether this claim is supported by the data.

Since the acquisition of TCSs can be investigated in a number of ways, a method that is the best and the most practical for the present study had to be identified. First, since one of the objectives of the empirical study is to observe the performance of the learners at different proficiency levels, a cross-sectional study is a natural choice due to its obvious advantage of being able to observe language acquisition at different stages simultaneously. Regarding the type of tasks, since a large number of structures are involved and many of them are not obligatorily used in a free production task, I decided to use metalinguistic data. The discourse nature of the use of TCSs also suggests that a task in discourse completion which involves the use of context is appropriate. Thus, experiment 1 used a judgment task in discourse completion that calls for the use of the 11 TCSs.

In this chapter, I will first provide a description of the task, including a description of the subjects, the type of stimuli used, design considerations and the procedure of the data elicitation. After that, the analysis and the results will be presented followed by a discussion of the issues closely related to the data. I will reserve more general issues such as theoretical and pedagogical considerations for a more general discussion in Chapter Seven.

5.1. Subjects

Forty-nine subjects (30 male and 19 female) at different proficiency levels in L2 Chinese participated in Experiment 1. At the time of the experiment, they were college/university students taking Mandarin Chinese as a second language (or a foreign language) in three different locations, Canada, United States and the People's Republic of China. All subjects were native speakers of English. According to the information gathered from the questionnaire the subjects filled out, 22 of the subjects speak no other language except English and Chinese; 18 of them speak one other none-topic-prominent language (usually French, Spanish, German, or Italian); 6 of them speak two or three other none-topic-prominent languages and 5 some Japanese or Korean.

All subjects were learning Chinese in classroom setting at the time of the experiment. But some of them, especially those in China, may have also been exposed to naturalistic language learning environment. This is an uncontrolled factor in the present study. The length of time they had been learning Chinese ranged from six months to eight years. All the subjects had learned the Pinyin system through the courses they had taken prior to the experiments.

To prepare for the analysis of the subjects' performance on different proficiency levels, the subjects who participating in the present study were divided into three proficiency levels: beginner, intermediate and advanced. Three sources of information were used to group the subjects:

a) the subjects' total scores for the distracter items of the experiments in the present study,

b) the length of time they had been studying Chinese at the time of the experiments, and

c) their scores on a Cloze test which they took at the onset of the present study (this will be further described in the next chapter).

As a result, the 49 subjects were divided into three proficiency levels, 17 in the beginner level, 16 in the intermediate level and 16 in the advanced

level. It should be noted that these are general proficiency levels independent of their performance on the TCS categories in the present study.

5.2. Description of the Task

Experiment 1 examines the subjects' knowledge of the 11 TCS categories in a judgment task. The task is in pencil-and-paper format.

5.2.1. Stimuli

For each of the 11 TCS categories (see section 4.3.), two written test items were created, which made 22 test items in total. These items were mixed with 18 distracters (thus, 40 in total) and presented to subjects in random order.

Each item had three parts. In the first part, a piece of discourse was presented in English. In the second part, a major section of the discourse had been translated into Chinese, but the position of the target sentence was left blank. In the third part, 4 sentences in Chinese were provided for the translation of the target sentence. The four choices were in different word orders, but only one of them had the appropriate TCSs. The other three were either grammatical but inappropriate for the context, or ungrammatical. The task of the subjects was to make judgments on the grammaticality and appropriateness of these 4 choices according to the given contexts, using a four-point scale provided after each choice. Exemplified below are two examples illustrating the form of the stimuli. The scale for judgment in these examples will be defined and explained in the next section. The number in the bracket after each scale shows what the correct judgement should be for that particular sentence. This, of course, was not presented to the subjects in the experiment.

(5.1) Samples of the Test Stimuli for Experiment 1 (Judgment Task)[42]:

A. "I got this job four years ago and started saving money right away. <u>I bought a new car last week</u>. I like it very much."

Chinese Context:

"Wo si-nian yiqian zhaodao zhege gongzuo, mashang kaishi cunqian.
I four years ago got this job immediately start save money
_____. Wo hen xihuan."
I very like

(a)	Wo mai-le yi-liang xin-qiche shang-xingqi.	3	2	1	0	(0)
	I bought a new car last week					
(b)	Shang-xingqi wo mai-le yi-liang xin-qiche.	3	2	1	0	(3)
(c)	Wo shang-xingqi mai-le yi-liang xin-qiche.	3	2	1	0	(2)
(d)	Yi-liang xin-qiche wo shang-xingqi mai-le.	3	2	1	0	(1)

B. "There are two cups of tea here. Which one is mine?"
"You can take that one. <u>I have already taken a sip from this one</u>."

Chinese Context:

Ni keyi he nei bei. _____.
you can drink that cup

(a)	Wo he-le zhei bei cha le yijing.	3	2	1	0	(0)
	I drank this cup (of) tea PRT already					
(b)	Zhei bei cha wo he-le yijing.	3	2	1	0	(0)
(c)	Zhei bei cha wo yijing he-le.	3	2	1	0	(3)
(d)	Wo yijing he-le zhei bei cha le.	3	2	1	0	(2)

Since this is a recognition and judgment task, the choices for each item fit into the provided context with different degrees of grammaticality and appropriateness. By presenting the choices in random order and asking the subjects to make judgments on them, it was hoped that the

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[42] For both Experiment 1 and 2, the stimuli were presented to the subjects with tone marks on all Chinese syllables.

results would reveal the subjects' ability to recognize the grammaticality and appropriateness of the TCSs.

5.2.2. Design Considerations

As has been discussed in Chapter Three, the control of secondary variables is an important issue in SLA research. Therefore, in order to bring out clear and maximum results for the present study, the following was taken into consideration in the design of the stimuli:

Vocabulary. A common problem in observing the acquisition of syntactic structures is that the observation may be contaminated by secondary factors such as the use of vocabulary unfamiliar to the subjects. In order to minimize this potential problem for the present study, the vocabulary used in the stimuli was limited to basic vocabulary as much as possible. Efforts were made to ensure that they were the ones usually learned in beginner Mandarin courses.

Providing the gloss. To further ensure that the subjects knew all the words used in the choices, an English glosses were provided. I decided to put the gloss under the first choice of each item, instead of under the target sentences in English. The reason is that, if the glosses were presented in English word order, it might introduce a bias towards English word order in the subjects' judgments. Since the 4 choices for each item were randomly ordered, the first choice could be in any order and, thus, free of bias.

Choices. In order for the four choices for an item to be comparable in terms of grammaticality and appropriateness, the different choices were made up of similar vocabulary, with the major difference in word order.

Sentence length and complexity. Sentence length and complexity is directly related to difficulty. In order to control this variable, the target sentences were limited to simple declarative sentences with only subject, verb, direct object and optional adverbial expressions. There were neither

embedded clauses, nor serial verb constructions. The range for the number of words in the target sentences was 6-10. Also for the sake of simplicity, the verbs used were transitive verbs whenever possible.

Providing context. In order for certain word order to be used, obligatory contexts have to be provided. In the present study, the general situation for each item, including the content of the target sentence and its immediate context, was provided to the subjects first in English. The purpose is for the subjects to know the situation while avoiding the difficulty of reading Chinese so that the noise due to that factor could be reduced. Then, the immediate context that determines the word order of the target sentence was provided again in Chinese. The subjects were told to make their judgments according to this context. At present, there is little description in the field of discourse analysis of when certain TCSs should be used. Considering the nature of TCSs, when to use certain TCSs can hardly be reduced to rules. In order to make sure that the contexts provided are appropriate for the use of the target TCSs, all the test stimuli were verified by 20 native speakers of Mandarin Chinese prior to the experiment.

Criteria for judgment. Instead of asking subjects to choose the best sentence or to arrange the choices from the best to the worst, I decided to ask them to make judgments on the grammaticality and appropriateness of each of the 4 choices. By doing so, I could obtain information not only on their judgments, but also on the reason for their judgments, so that I could compare their acquisition of the grammaticality and appropriateness of the TCSs and find out whether they developed their grammatical competence prior to their communicative competence, or vice versa.

Use of Pinyin. In order to avoid the difficulty of reading and writing Chinese characters, Pinyin was used instead.

5.2.3. Procedure

The task was completed by the subjects either individually or in groups. The stimuli were distributed to the subjects with written instructions in front. The following was included in the instructions:

a) The subjects were told that within the context of each test item, four sentences had been produced by some L2 Mandarin learners. The task of the subjects was to make judgments on these sentences according to the given criteria.

b) For each item, the subjects should read the context and the target sentence carefully first;

c) Then, read the four translation sentences;

d) Thirdly, make a judgment for each of the sentences in translation according to the following criteria:

3 - both grammatical and appropriate for the context;

2 - grammatical but inappropriate for the context;

1 - good sentence structure with minor grammatical errors;

0 - ungrammatical.

e) The subjects do not have to use all the four numbers (3-0) for every item. The four provided sentences in translation could be all good, all bad or in various degrees of acceptability. Their judgments should be made according to the immediate contexts of the target sentences in Chinese.

Examples were provided with the instructions to show what exactly the subjects were expected to do. The subjects were told to complete the task at their own pace without seeking help from others.

5.3. Categories of TCSs - Results and Discussion

The data collected were then analyzed to answer the following questions:

a) Are the subjects' responses to the different TCS categories significantly different?

b) Which hypothesis (or hypotheses) closely corresponds to the subjects' performance?

c) Do the learners acquire grammaticality of TCSs prior to the appropriateness, or vice versa?

5.3.1. Tabulation of Data

Subjects' responses to the 22 test items were first tabulated to find out the accuracy rate in their judgment of the appropriateness of the TCS categories. This analysis only considered whether they made the right judgment on the only appropriate sentence among the four choices. When a grammatical and appropriate sentence was chosen as the only "3" among the 4 choices for an item, this item received the score of "1". Otherwise, the item received "0". Thus, for each item, each subject scored either "1" or "0". This scoring method, however, was only used for the analysis described in this section. For other analyses, e.g., error analysis, a different scoring method was used.

5.3.2. Results

In order to see whether there were differences in the subjects' performance for the different TCS categories, the individual scores for every TCS category were first totaled. Since there were two test items for each TCS category, the highest score a subject could get for each category was 2.

The mean score for each of the 11 categories was then calculated. The results are presented in Figure 5.1. by arranging the categories according to their scores in descending order:

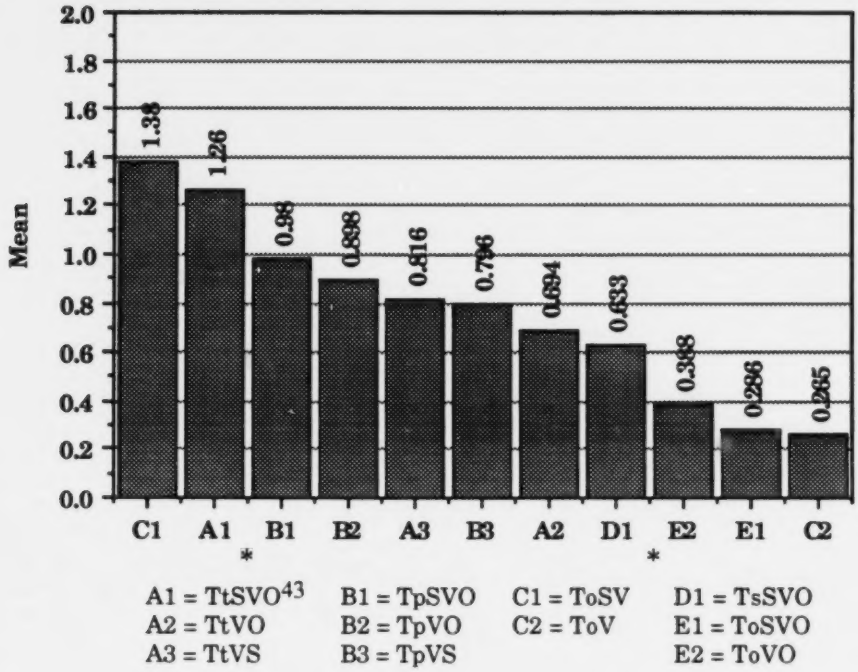

Figure 5.1: Experiment 1:
Mean Scores of the TCS Categories - Judgment

As can be seen from Figure 5.1, the mean scores show considerable variation among the 11 TCS categories. The results of one-way repeated measures ANOVA indicated that the overall difference among the categories was significant ($F(10, 48) = 15.25$, $p < .0001$). Post hoc tests (PLSD; $p < .05$) show that any two categories with the difference in the scores greater than .261 are significantly different.

In Figure 5.1, there are two distinctive natural breaks between the consecutive scores, shown by the positions of the asterisks. The first is between the categories A1 and B1, where there is a significant difference

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[43] The lower case letters in the coding indicate the role of the topic, e.g., Tt means "time expression as topic"; Tp means "place/location as topic"; To means "object as topic" and Ts means "subject as topic".

between the two scores. This suggests that the subjects' performance for C1 and A1 is significantly better than their performance for all the other categories. The second break is between D1 and E2 where the difference is not significant, but very close to the critical level of significance (0.245/0.261). This implies that the subjects' performance for the three categories at the lower end of the scale, i.e., E2, E1 and C2, is significantly less accurate than all the other categories. Due to the gradient nature of the scores, it is difficult to further indicate other significant differences among the mean scores. However, the value labels in Figure 5.1 and the PLSD can be referred to for levels of significance.

To answer the question of which hypothesis or hypotheses most closely correspond to the data, the mean scores of the TCS categories were then converted into a rank order and compared to the five hypotheses. The following table, Table 5.1, displays a comparison of the predicted orders according to the five hypotheses and the actual order of acquisition obtained from the data of this experiment:

Table 5.1: Acquisition Order of the TCS Categories - Five Hypotheses and Experiment 1 (Judgment):

	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
H1: semantics	1	1	1	1	1	1	7	7	9	9	9
H2: word order	1	6	9	1	6	9	5	11	1	1	6
H3: distance	2	2	2	5	5	5	8	8	1	8	8
H4: Stru. Comp.	1	1	1	6	6	6	1	1	6	6	6
H5: L1 vs. L2	1	5	5	3	5	5	1	5	5	5	3
Data: Experiment 1	2	7	5	3	4	6	1	11	8	10	9

In order to see which hypotheses are most highly correlated with the data, a Spearman rank correlation analysis was conducted, yielding the results in Table 5.2:

Table 5.2. Experiment 1: Correlation between the Results (Judgment) and the Hypotheses

Correlation	r_S
Results and Hypothesis 1 (semantics)	.613
Results and Hypothesis 2 (word order)	.221
Results and Hypothesis 3 (distance)	.251
Results and Hypothesis 4 (str. comp.)	.289
Results and Hypothesis 5 (L1 vs. L2)	.62

The correlation coefficients in Table 5.2 indicate that the data obtained are best correlated with Hypothesis 1 (i.e., semantic factor, r_S = .613) and Hypothesis 5 (i.e., influence of L1 r_S = .62).

5.3.3. Discussion

As one can see from the above results, the subjects responded to the TCS categories differently. The overall differences are statistically significant. This confirms the basic hypothesis of the present study, i.e., the TCS categories are structurally different and these differences cause different degrees of difficulty in L2 acquisition.

Looking at the subjects' performance shown in Figure 5.1, one may notice that the scores of the categories are in general very low. The highest average accuracy for all subjects is for the category C1, which is only 68%; the lowest averages are only around 15%. This suggests that the use of TCSs may be a difficult aspect of language learning. In the next chapter, we will see that the low accuracy in the performance observed in this experiment is further verified by the results from another experiment using a translation task. In that experiment, the scores obtained are even lower. At this point, I would like to make note of this phenomenon, but

leave the detailed discussion for Chapter Seven when I can discuss the results of the two experiments together with the information on the performance of the subjects on different proficiency levels.

The correlation coefficients in Table 5.2 indicate that there is a correlation between the subjects' responses and Hypothesis 1 based on the semantic types of the topics. A closer look at Table 5.1 reveals that Hypothesis 1 basically separates the 11 TCS categories into two groups. The first group consists of structures with temporal (Type A) or locative (Type B) expressions as topics. In the second group, the topic is either a patient (Type C), or an NP which is semantically associated with the agent or the patient in the subsequent clause by way of whole-part, class-member or possessor-possessee relation (Type D & E) (cf. section 4.3.2.).

Comparing the two groups, one can see that the main difference lies in the manner of θ-role assignment and the interpretation of thematic roles of the topic NPs. For the first group, the thematic roles of the topics, i.e., either time or location of events, can be directly interpreted by using the lexical meaning of the expressions (e.g., ***Last year,*** *he wrote a book*. and ***In the village,*** *people built new houses*.). The second group, however, is different. The thematic roles of the topic NPs cannot be interpreted so easily. First of all, the topic NPs in this group are ordinary NPs whose thematic roles as either agent or patient cannot be determined by the meaning of the lexicon itself. They have to be assigned by the verb. Secondly, topic position is not a θ-position, i.e., verbs do not assign θ-roles to this position directly. Therefore, the θ-roles of the NPs in topic position have to be interpreted through their related elements in the following clause. In a Type C sentence, for example (as in ***This book,*** *I have read* ∅.), the topic NP is coreferential with the empty object NP which has a thematic role of patient. Therefore, the topic NP can be interpreted as also having a patient role through this coreferential relationship. In a Type D (e.g., ***His three children, two*** *have bought houses*.) or a Type E (e.g., ***This book,*** *I have read* ***the first chapter***.) sentence, the structure is even more complicated. The topic NPs and their related elements are not even coreferential, because the two referents are not identical. They are related in the sense

that the referent of one NP (e.g., *the first chapter of the book*) is part of the referent of the other NP (e.g., *the book*). Using Jackendoff's terms (1983, 1990), these are two different NPs used to express one concept of [THING] . But one of the two NPs is in TOP position, the other is in the comment. The thematic role of the topic NP in such a structure has to be interpreted through its semantic relationship (whole-part, class-member or possessor-possessee) with another NP in the following clause.

The data of this experiment show that the different manner of the interpretation of thematic roles of the topics and their relation with the rest of the sentence has psychological effects in language learning. The categories in the first group, due to their simple manner of θ-role assignment, are relatively easy to manage and, therefore, acquired earlier than the categories in the second group.

Another finding represented in Table 5.2 is that the subjects' responses are correlated with Hypothesis 5. This suggests that the influence from the subjects' L1 also plays an important role in the acquisition of the TCS categories. Referring back to Table 5.1, it can be seen that what Hypothesis 5 predicted correctly is the early acquisition of the categories A1 (TtSVO, as in *This morning I looked at three houses.*) and C1 (ToSV, as in *That letter, I have mailed already.*). These are the categories that have identical structures in English and Chinese. The early acquisition of these structures indicates that identical structures in the two languages enhanced the learning and resulted in the so-called "positive transfer" (Selinker, 1992). In order to find out at which stage(s) in the acquisition of the TCSs such transfer is most helpful to the learning, the subjects' total TCS scores were divided into three groups ranging from the lowest (Stage 1) to the highest (Stage 3). Figures 5.2 below displays the average scores of the TCS categories for each of the three stages:

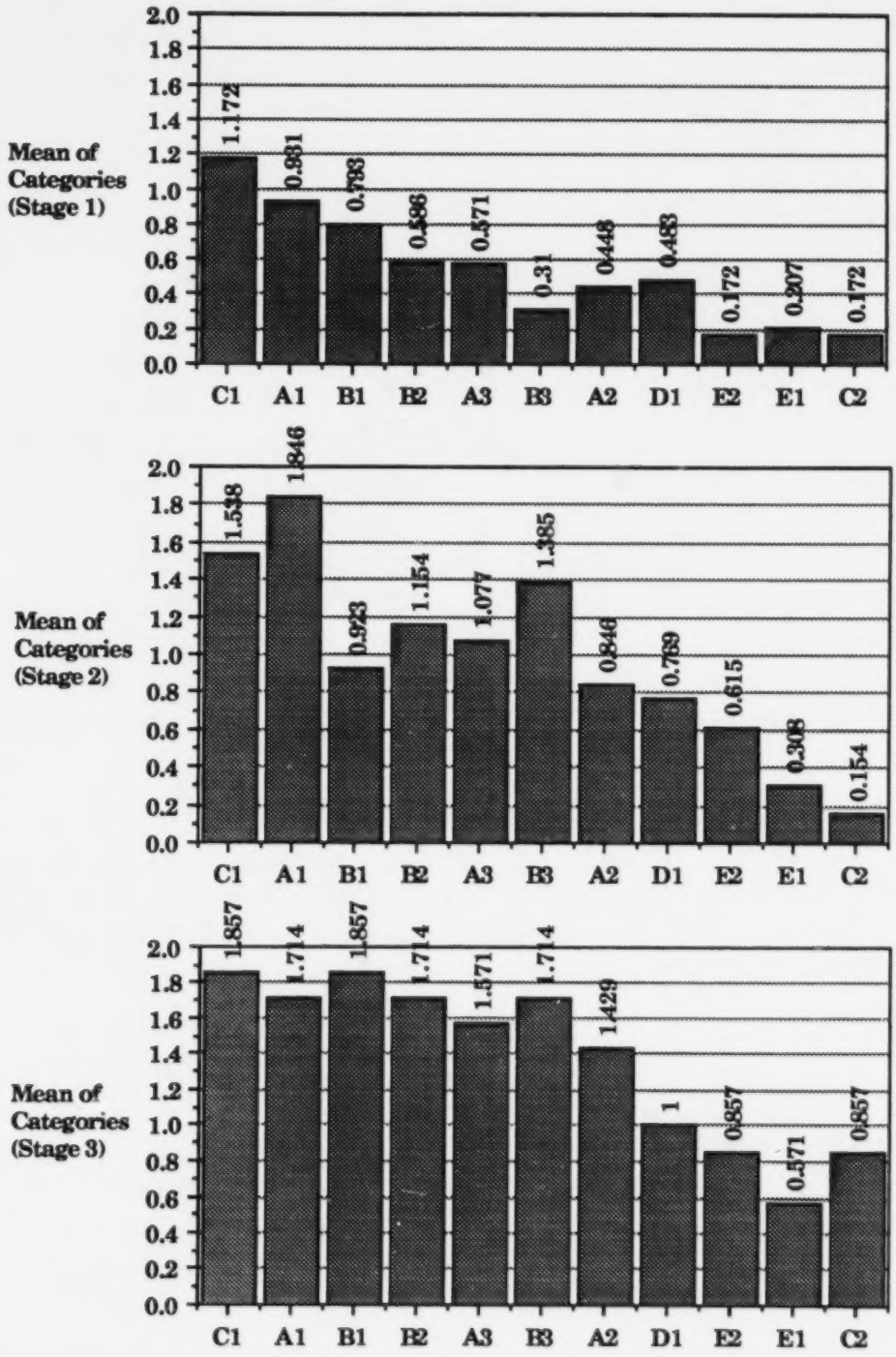

Figure 5.2: Three Stages of TCS Acquisition - Judgment

A comparison of the above 3 stages indicates that the enhanced acquisition of the categories A1 and C1 can be seen most clearly in the first two stages of learning. This may be due to the fact that, at early stages of acquisition, the learners do not have much L2 knowledge and, therefore, have to depend on their L1 knowledge for the completion of the task. Seen from another perspective, learners at early stages may be consciously or unconsciously testing out the structures in their L1, especially the unmarked structures, for the purpose of constructing their L2 system. This could have two different types of results, a positive one when a correct structure is produced in L2 (i.e., "positive transfer") and a negative one when an error is made (i.e., "negative transfer"). In the field of L2 acquisition, the influence from L1 has been observed to be a pervasive phenomenon. However, research in the area has always put emphasis on negative transfer. Cross-linguistic similarities and how they facilitate L2 acquisition have not been investigated on the same scale. Here, in this part of the present study, we observe a case in which positive transfer has promoted utterances that are not only grammatical but also appropriate for discourse organization.

Comparing the results with Hypothesis 5 again, an obvious discrepancy can be observed, that is, the Hypothesis did not correctly predict the acquisition of the category E2 (i.e., ToVO). In this category, topics are semantically related to the object of the following clause. A rather early acquisition was predicted by Hypothesis 5 for this category because, when judged by native speakers of English, a sentence of this category, *Some articles have changed the titles*, was considered acceptable in English by some of the informants. The explanation given was that, although the sentence is unacceptable in formal written English, some people do say this in oral speech. Based on this explanation, one possibility could be proposed, i.e., the genre difference causes the structure to be considered "marked" in English by native speakers which, as the result, prevents transfer[44]. If

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[44] By looking at Figures 5.2, great improvement can be observed for the category E2 between Stage 2 and Stage 3. Does this have anything to do with the fact that the category has similar structure in English, even though it exists only in informal style? If it does, why

this is the case, then, it seems that identical structures in L1 and L2 do not necessarily result in positive transfer. Whether an L1 form is transferred into IL may also depend, at least to a certain extent, on the learners' perception of the degree of markedness of the structure. Actually, this is not a new observation. Kellerman (1983) investigated L1 influence from a psychological point of view and found that transfer is constrained when a particular L1 structure is perceived as "marked". When making this point, he also argued that, based on our current understanding of L1 influence on L2, the main question in transfer study is not whether transfer exist, but how transfer is constrained in various ways. He pointed out that only by investigating the nature of these constraints can we explain, rather than merely speculate on, why transfer is sometimes observed and sometimes not.

In Table 5.2, it is also indicated that three hypotheses are not correlated with the data. These hypotheses are based on the syntactic characteristics of the TCS categories: Hypothesis 2 (according to word order), Hypothesis 3 (according to the distance between the topic and its related element in the comment) and Hypothesis 4 (according to the structural complexity involved). The reason for the syntactic factor not playing an important role in this study is, I believe, that the sentence structures involved all designate simple predications without complex modification for the nouns nor for the verbs. In terms of word order, for example, the word order phenomena in Chinese that are the most difficult for the learners to acquire in general are the structure and the position of relative clauses and the preverbal vs. postverbal position of adverbials. These are not included in the present study. Due to the simple predications involved in the present research, the distance between the topics and their related elements is also very short. The variation is not large enough to produce significant differences in the subjects' responses.

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does not this transfer happen in earlier stages of acquisition when transfer is supposedly more likely to happen? These, I think, are further research questions that require more data for solid claims.

5.4. Error Analysis - The Acquisition of Grammaticality vs. Appropriateness

In the previous section, the data were analyzed and discussed in terms of the differences in the subjects' performance for the TCS categories. In addition to that, I would also like to look at the data from another angle and observe the acquisition by examining the errors. This is the objective of this section. I will focus on the answer to the following three questions:

a) Do learners acquire grammaticality of a structure together with the appropriateness of the structure in use?

b) If they do not, what do they acquire first and why?

c) What do the results tell us about the learning process?

5.4.1. Recognition and Description of Error Types

In the stimuli, there are basically four types of sentences along the grammaticality vs. appropriateness scale: a) grammatical and appropriate; b) grammatical, but inappropriate for the given context; and c) sentences with minor grammatical error(s) and d) ungrammatical. During the experiment, the subjects were instructed to make a judgment on each stimulus sentence on a four point scale (cf. section 5.2).

During the scoring procedure for error analysis, the subjects' responses were scored according to whether they were able to recognize the four types of stimuli. A correct judgment for a sentence was coded as "1"; otherwise, a "0". However, one thing should be noted. Since it is sometimes difficult to distinguish whether a sentence is "with minor grammatical error" or "ungrammatical", a judgment of "1" (i.e., with minor error) was not considered incorrect when the expected correct answer was "0" (i.e., ungrammatical), or vice versa.

For convenience, the four types of stimuli are illustrated below:

(5.2) Example for the 4 Types of Stimuli for Experiment 1 (Judgment):

Context:
"I got this job four years ago and started saving money right away. I bought a new car last week. I like it very much."

Context in Chinese:

"Wo	**si-nian**	**yiqian**	**zhaodao**	**zhege**	**gongzuo,**	**mashang**	**kaishi**		
I	*four years*	*ago*	*got*	*this*	*job*	*immediately*	*start*		
cunqian.	_____					**. Wo**	**hen**	**xihuan."**	
save money						*I*	*very*	*like*	

(a) **Appropriate**: Shang-xingqi wo mai-le yi-liang xin-qiche.
last week I bought a new car

(b) **Grammatical**: Wo shang-xingqi mai-le yi-liang xin-qiche.

(c) **With Minor Error**: Yi-liang xin-qiche wo shang-xingqi mai-le.

(d) **Ungrammatical**: Wo mai-le yi-liang xin-qiche shang-xingqi.

In (5.2), within the given context, (5.2a) is both grammatical and appropriate; (5.2b) is grammatical but inappropriate for the context; (5.2c) has an minor error because an indefinite NP is not usually put in sentence-initial position in Chinese; and (5.2d) is "ungrammatical" because the time adverbial is put in sentence-final position.

5.4.2. Results

The subjects' scores for the four types of stimuli were then totaled. Figure 5.3 below shows the percentage of the subjects' correct judgments for the four types of stimuli: 38% for appropriate and grammatical sentences, 63.5% for grammatical but inappropriate sentences, 56.8% for sentences with minor errors and 79.6% for ungrammatical sentences.

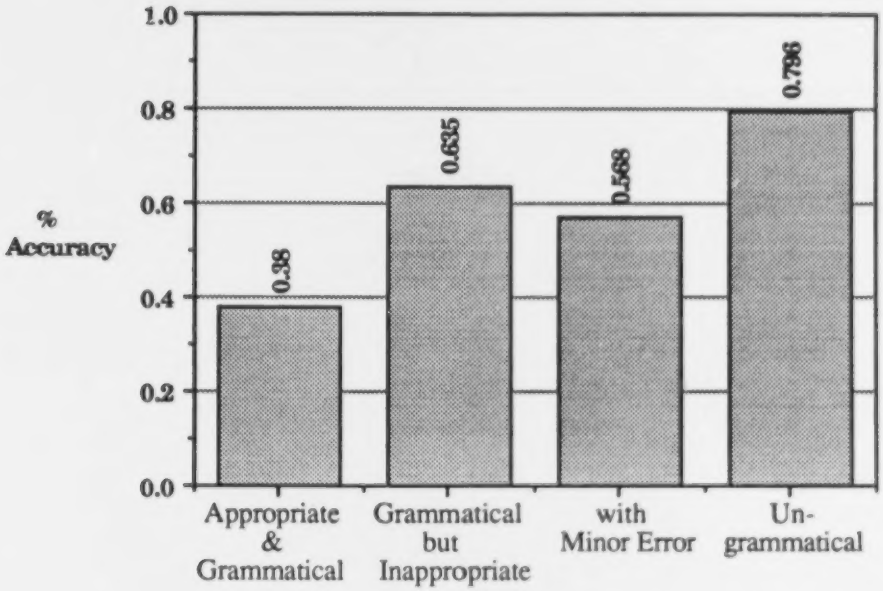

Figure 5.3: Experiment 1: Accuracy of Judgments on Grammaticality vs. Appropriateness Types

A one way analysis of variance indicates that there is significant variation in subjects' ability to make correct judgments on the four types of stimuli ($F(3, 48) = 99.682$, $p < .0001$). The differences among the four types are all significant (PLSD = .048; $p<.05$).

In Figure 5.4, the improvement of subjects on recognizing these types of stimuli over the proficiency levels can be seen. Each of the four stimulus types shown in Figure 5.3 is decomposed into three scores to show the performance of subjects on each proficiency level (cf. section 5.1. for a description of the general proficiency levels of the subjects):

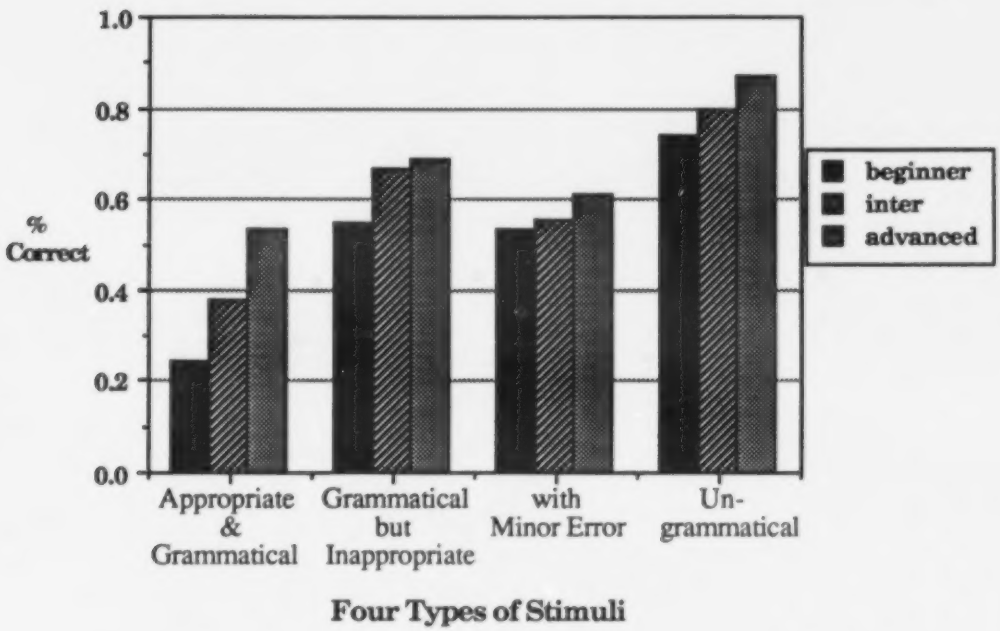

Figure 5.4: Proficiency Levels and Grammaticality vs. Appropriateness Types

In Figure 5.4, we can see that the subjects' performance improved consistently over all the categories as their proficiency levels get higher. Their greatest improvement is in the recognition of appropriate TCSs.

Additional analysis also indicates that there are large individual differences in the subjects' ability to make the right judgments. Therefore, in the following table, Table 5.3, the subjects' scores for 3 categories (Appropriate, Grammatical (but inappropriate) and Ungrammatical) were divided into three levels, arranged from the lowest level (1) to the highest (3), and then compared to their general proficiency levels:

Table 5.3: Comparison of Subjects' Proficiency Levels with Their Performance on Grammaticality vs. Appropriateness Types

Advanced Proficiency Level (16 subjects)					
Appr 3	6 (38%)	Gram 3	10 (63%)	Ungram 3	13 (81%)
Appr 2	7 (44%)	Gram 2	5 (31%)	Ungram 2	3 (19%)
Appr 1	3 (19%)	**Gram 1**	**1 (6%)**	Ungram 1	0
Intermediate Proficiency Level (16 subjects)					
Appr 3	0	Gram 3	8 (50%)	Ungram 3	8 (50%)
Appr 2	7 (44%)	Gram 2	8 (50%)	Ungram 2	7 (44%)
Appr 1	9 (56%)	Gram 1	0	Ungram 1	1 (6%)
Beginner Proficiency Level (17 subjects)					
Appr 3	0	**Gram 3**	**2 (12%)**	Ungram 3	5 (29%)
Appr 2	0	Gram 2	9 (53%)	Ungram 2	10 (59%)
Appr 1	17 (100%)	Gram 1	6 (35%)	Ungram 1	2 (12%)

Table 5.3 indicates that, among the 16 subjects on the advanced proficiency level, 6 of them have high ability to judge appropriate sentences (Appr 3); 7 of them have medium ability to judge appropriate sentences (Appr 2) and 1 has low ability to judge appropriate sentences (Appr 1). For judging grammatical but inappropriate sentences, 10 of them have high ability (Gram 3); 5 have medium ability (Gram 2) and 1 has low ability (Gram 1), and so on.

The analysis shows that the subjects' performance is not balanced over all categories. Some of the subjects on the advanced level, for example, scored low on appropriate TCSs but high on grammatical sentences, or vice versa. Some beginner-level subjects scored high on grammatical sentences, but they all did poorly in recognizing appropriate sentences. The implication of this will be discussed in the next section.

5.4.3. Discussion

From Figure 5.3 we can see that the subjects performed better on grammaticality than on appropriateness. The difference is significant. This implies that the learners acquire the knowledge of grammaticality before they acquire the knowledge of appropriateness. If we interpret this in terms of grammatical vs. communicative competence, the result shows that learners acquire grammatical competence earlier than communicative competence. Part of this is certainly due to the fact that the acquisition of grammatical competence involves only the knowledge of sentence structure, whereas the acquisition of communicative competence involves both sentence and discourse structures. A question that may be asked at this point is whether the acquisition proceeds from grammatical to communicative competence or vice versa is affected by classroom vs. natural learning environment. If it is, to what extent? Traditionally, classroom instruction is focused on grammaticality of individual sentences without serious consideration of discourse contexts. Appropriateness of word order is usually left out from teaching for the learners to figure out by themselves. In natural learning environment, since utterances are always produced and learned within contexts, one would assume that the learners will be more aware of whether an utterance fits the context or not. Therefore, I strongly suspect that appropriateness is more of a priority for learners in natural environment as grammaticality is for learners in classrooms. But, for a more solid claim, a study specially designed to compare learners in different learning environments is needed.

From Figure 5.3, we also see that the subjects performed best on the stimuli that are "ungrammatical". This category consists of sentences with English word order that are unacceptable for Chinese. The high percentage of accuracy for this category shows that most of the learners had the knowledge of the unacceptability of the particular English orders for Chinese. At the time of the experiment, they had passed the stage on which these errors are commonly made. This point will be further discussed in the discussion on word order errors for Experiment 2 in the next chapter.

Several other things emerge from Figure 5.4. First, the subjects' performance improved consistently through the proficiency levels for all 4 types of stimuli. This shows that the acquisition of appropriateness proceeds along with the acquisition of other aspects of the language, namely, the recognition of grammatical and ungrammatical structures. An interesting point is that, while most of the improvement in other areas is insignificant across the proficiency levels, progress in the acquisition of appropriateness is significant across all three levels. This suggests that, among all the types of structures investigated by the present study, what the learners acquire most is how to use TCSs in appropriate discourse contexts. Grammaticality is part of the acquisition, but only the beginner to intermediate levels show significant improvement.

This, I believe, relates to the types of sentences investigated. Among the sentence types covered by the present study, the ones in canonical Chinese word order are quite simple and straightforward. The subjects in intermediate and advanced levels should find them familiar. It is the TCSs that are difficult for learners at all levels. This indicates that, although the acquisition of appropriateness proceeds with other aspects of acquisition, it is a different type of acquisition that has its own nature and sets its own pace.

5.5. Summary

In this chapter, Experiment 1 of the present study is reported, including the setup, the stimuli, the subjects participating in the experiment, the results and the discussion of some related issues.

The judgment data obtained in this experiment show that the subjects' performance on the TCS categories is in general very low in accuracy. However, their responses to the different TCS categories are significantly different, which reveals different degrees of learning difficulty

among the categories. Based on the data, the 11 TCS categories seem to form three groups in a learning sequence:

a) the easiest: A1 and C1

b) medium level in difficulty: A2, A3, B1, B2 and B3

c) the most difficult: C2, D1, E1 and E2

Among the factors that may have a bearing on the acquisition of the TCSs, two are found to be closely related to the results: the semantic characteristics of the TCSs and the influence of the learners' L1.

The results also show that the grammaticality of a structure and the appropriateness of the structure in use are not acquired together. This is indicated by the significant difference in the subjects' abilities to make judgment on different types of stimuli. In general, we can say that recognition of grammaticality is acquired before the recognition of appropriateness. More specifically, the subjects seem to acquire the ability to recognize ungrammatical sentences first and the appropriate use of grammatical structures last.

The performance of the subjects on different proficiency levels also shows considerable variation. Some learners have high achievement in grammaticality but very low scores for appropriateness; some are just the opposite. Their general proficiency levels do not necessarily correspond to their abilities in different areas.

The above results and claims are based on the judgment data in Experiment 1. In the field of SLA, the validity of using metalinguistic data as evidence for language proficiency has been widely discussed (cf. section 3.2.2). Thus, one has greater confidence in findings that are supported by more than one type of experiment. For this reason, another experiment was also carried out to examine the acquisition of TCS. This experiment used a translation task to elicit data. In the next chapter, Experiment 2 will be reported.

CHAPTER SIX
Experiment 2 - Translation Task

6.0. Introduction

The purpose of Experiment 2 is to observe the acquisition of the same 11 TCS categories tested in Experiment 1 in a production task and to answer the question of whether L2 learners' ability to recognize appropriate TCSs is the same as their ability to produce these structures. If they are different, then I would like to find out in what ways they differ and what the difference says about learners' interlanguage knowledge.

In order to compare the results with Experiment 1, enough information must be obtained for all the 11 categories. For this reason, a free production task such as story-telling or describing pictures might not produce a sufficient corpus of data[45]. Therefore, I decided to use a translation task in which better overall control can be maintained. As in Experiment 1, this task involved the completion of discourse.

This chapter will proceed the same way as the previous one. First, I will describe the setup of the experiment, including the subjects, the stimuli used, design considerations and the procedure of the data elicitation. After that, the results will be presented followed by a discussion.

6.1. Subjects

In order to minimize within-subject variability, the same forty-nine subjects who participated in Experiment 1 also participated in this experiment.

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45 Refer to the discussion on this issue in section 3.2.2.

6.2. Description of the task

This experiment covers the same 11 TCS categories as Experiment 1. The 40 items of stimuli also correspond to those in Experiment 1, which include 22 test items (2 for each category) and 18 distracters. The task is also in pencil-and-paper format.

6.2.1. Stimuli

As in Experiment 1, each stimulus item was presented as a piece of discourse. There are three parts in each item. First, the piece of discourse was presented in English, within which one sentence (underlined) was to be translated into Chinese by the subjects. This is the target sentence. In the second part, the words needed for the translation of the target sentence were provided with the English gloss underneath. In the third part, the immediate context of the target sentence was already translated into Chinese, but the position of the target sentence was left blank. The task of the subjects was to translate the target sentence into Chinese by arranging the provided words in whatever word order they thought the best for the context. It was hoped that the information collected this way would reflect the learners' ability to produce connected and coherent discourse.

The following in (6.1) are two examples showing how the stimuli were presented to the subjects in Experiment 2. In these examples, the standard answers (underlined in the part for "translation") are supplied which, of course, were not presented to the subjects during the experiment. Additional explanation follows.

(6.1) Samples of the Test Stimuli for Experiment 2 (Translation Task):

A. Bob arrived at school in a hurry. His friends asked him why he was not wearing his jacket. He said, "**I washed it. It is still wet.**"

Words for translation:

xi	waiyi	wode	(wo	le)
wash	jacket	my	I	PRT

Translation:

"**Wode waiyi xi le . haishi shide.** "
my jacket wash PRT still wet

B. Susan works at a housing office. One day she told her supervisor that they were doing very well. "**Ten people moved out this month**," she said, "**but we have twenty applicants to move in.**"

Words for translation:

ban-zou	zhe-ge-yue	shi-ge-ren	(zai	le)
move away	*this month*	*ten people*		

Translation:

"**Zhegeyue banzou le shi-ge-ren. Keshi you ershi-ge-ren**
this month move out PRT ten people . but have twenty people
yao ban-jinlai."
want move in

6.2.2. Design Considerations

In addition to the considerations discussed in the previous chapter for Experiment 1, the following was also taken into account during the design of Experiment 2:

Providing the vocabulary. In this experiment, the words needed for the translation of each target sentence were provided to the subjects in random order with the English gloss underneath. The purpose of this was to reduce the difficulty of the task and to eliminate the factor of unknown vocabulary. Thus, what the subjects had to do for each item was only to

arrange the given words into a certain order. Furthermore, some phrases (e.g., PPs) were presented to the subjects as chunks instead of individual words. Classifiers were also put together with demonstratives such as *zhe* 'this' and *na* 'that'. By doing this, I hoped to examine the subjects' knowledge of the TCSs only and thus ensure the validity of the experiment.

Optional words. Different word orders require the use of different words, especially function words. In order to provide the subjects with a variety of possibilities for their translation, some optional words were provided in brackets. The subjects were told that the words outside of the brackets had to be used in their translation. This was to ensure that full sentences were used in their translation. The others, i.e., the ones inside the brackets, could be optionally used.

6.2.3. Procedure

This experiment was carried out prior to Experiment 1 to avoid the possibility of a learning effect from the judgment task. Since the completion of the tasks was time consuming, the two experiments were carried out at different times, with the time span between the two no more than two weeks. Experiment 2 was completed by the subjects, either individually or in groups. Before starting this experiment, each subject was asked to fill out a subject profile sheet. They were also instructed to take a Cloze test (in Pinyin), the result of which was used to determine their general proficiency levels (cf. section 5.1).

Test stimuli were distributed to the subjects preceded by written instructions. The following were included in the instructions:

a) The subjects were told that the study had two parts, both focusing on the use of word order. Therefore, they should not spend too much time considering the choice of vocabulary when completing the tasks.

b) For each item, subjects should read the context carefully first.

c) Then, they should locate the target sentence and the vocabulary provided for the translation.

d) Thirdly, translate the target sentence into Chinese using the words provided. The translation should be in the best word order for the context provided.

e) All the words outside of the brackets have to be used. If more words are needed, they can choose from the words inside the brackets. But they should not use words other than the ones provided.

f) The subjects were told that they should try different word orders to see which one is the best for the context. But they were expected to provide one and only one final best translation.

Examples were provided with the instructions to show what exactly the subjects were expected to do. The subjects were told to complete the task at their own pace, without seeking help from others.

6.3. Categories of TCSs - Results and Discussion

After collecting the data, an analysis was conducted to answer the following questions:

1) Are the results of this experiment compatible with the results of Experiment 1?

2) If they are not, what are the differences?

3) Do the learners acquire the ability to recognize the appropriate TCSs before they acquire the ability to produce them? If so, why?

4) What types of errors occur most frequently at different stages of learning?

Sections 6.3. and 6.4. will be devoted to answering these questions.

6.3.1. Tabulation of Data

First of all, the subjects' responses were tabulated for a comparison with the results of the 11 categories from Experiment 1. For this purpose, a response in translation that was both grammatical and appropriate for the

given context received a score of "1". All the others received "0". Thus, for each item, each subject scored either "1" or "0".

6.3.2. Results - A Comparison with Experiment 1

After the tabulation, each subject's score for every TCS category was totaled. Since there are two test items for each TCS category, the highest score one subject could get for every category was 2.

Then, the mean score for each of the 11 categories was calculated. The results are presented in Figure 6.1. The categories are arranged according to their scores in a descending order:

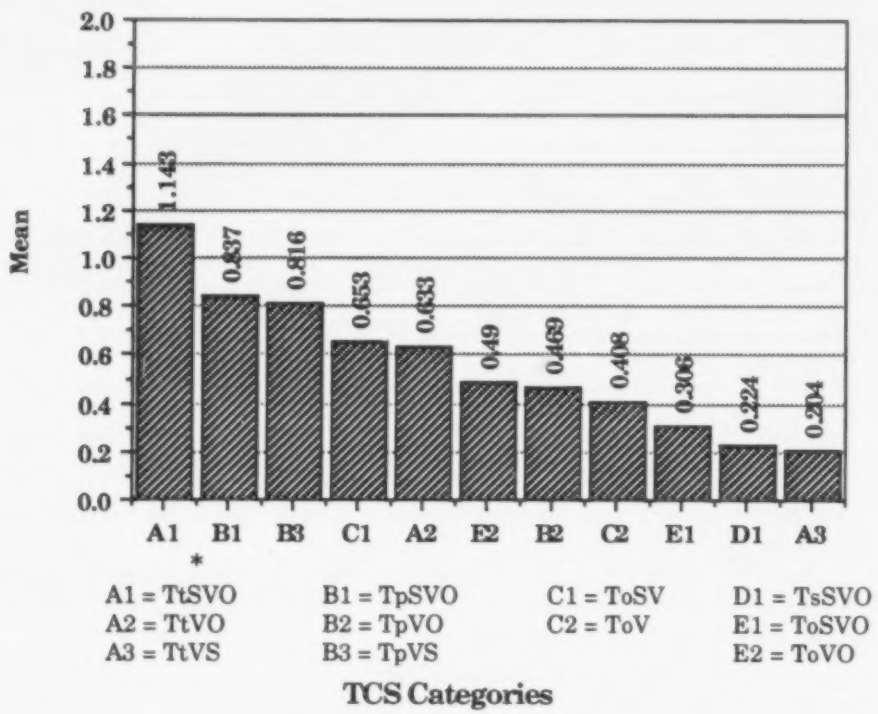

Figure 6.1: Experiment 2:
Mean Scores of the TCS Categories - Translation

As can be seen from Figure 6.1, the subjects' responses again show considerable variation among the TCS categories. The results of a one repeated measures ANOVA indicated that the overall differences among the categories were significant ($F(10, 48) = 10.032$, $p < .0001$). The result of post hoc tests (PLSD = .254; $p < .05$) showed that, in Figure 6.1, there is only one significant difference between consecutive scores. This is between A1 and B3, indicated by the position of the asterisk.

To compare the results of this experiment with the hypotheses and the results of Experiment 1, the mean scores of the TCS categories were converted into a rank order and put into the following table.

Table 6.1: Acquisition Order of the TCS Categories - Five Hypotheses, Experiment 1 and Experiment 2:

	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
H1: semantics	1	1	1	1	1	1	7	7	9	9	9
H2: word order	1	6	9	1	6	9	5	11	1	1	6
H3: distance	2	2	2	5	5	5	8	8	1	8	8
H4: Stru. Comp.	1	1	1	6	6	6	1	1	6	6	6
H5: L1 vs. L2	1	5	5	3	5	5	1	5	5	5	3
Data: Experiment 1	2	7	5	3	4	6	1	11	8	10	9
Data: Experiment 2	1	5	11	2	7	3	4	8	10	9	6

In order to see which hypotheses are most highly correlated with the translation data, analysis of Spearman correlation was conducted with the results in Table 6.2:

Table 6.2. Experiment 2: Correlation between the Results (Translation) and the Hypotheses

Correlation	r_S
Results and Hypothesis 1 (semantics)	.457
Results and Hypothesis 2 (word order)	.245
Results and Hypothesis 3 (distance)	-.062
Results and Hypothesis 4 (str. comp.)	.058
Results and Hypothesis 5 (L1 vs. L2)	.673

The correlation coefficients in Table 6.2 indicate that the data obtained are best correlated with Hypothesis 1 (i.e., semantic factor, r_S = .457) and Hypothesis 5 (i.e., influence of L1 r_S = .673). This pattern is consistent with the results of the judgment task in Experiment 1.

For the convenience of comparing the results of Experiment 1 and Experiment 2, the scores were put together in Figure 6.2 below. I arbitrarily decided to use the order in Figure 6.1 (data for translation) to range the categories in the figure:

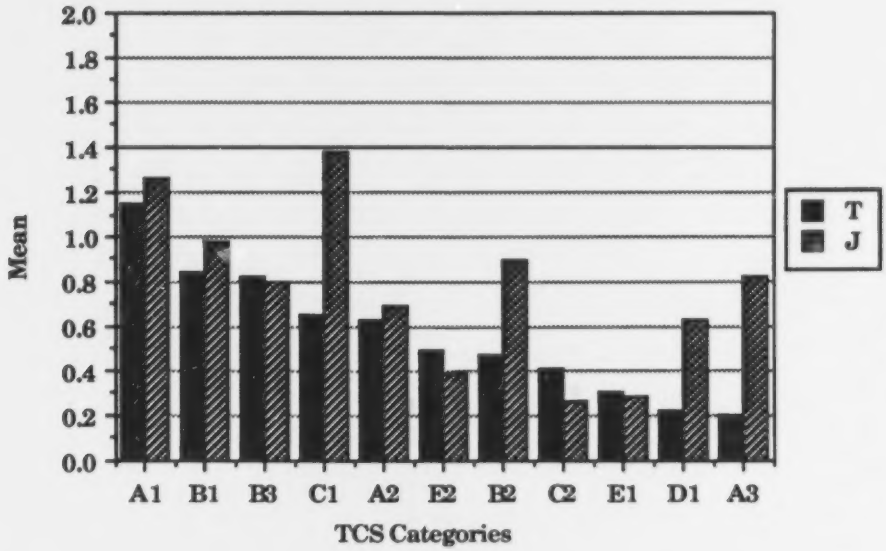

Figure 6.2: Comparison of TCS Scores Between Experiment 1 (Judgment) and Experiment 2 (Translation)

The data in Figure 6.2 above and the subsequent analysis shows that, although the scores of the two experiments are correlated in general (r=.591) and the subjects obtained higher scores in Experiment 1 (judgment task), the difference between the scores for the two experiments was found insignificant in a t-test (t (10) = 2.203, $p > .05$, two tailed). Table 6.2 shows the mean and the standard deviation of the two tasks:

Table 6.3: Means and Standard Divination of the Two Experiments - A comparison between Translation and Judgment

	Mean	SD
Judgment	.758	.364
Translation	.562	.289

A closer look at the scores of the categories reveals that the subjects performed better in Experiment 1 for 7 categories, of which 4 scores (A3, B2, C1 and D1) are significantly higher than the scores from Experiment 2

(translation task) ($p<.01$). For the other 4 categories for which the marks of Experiment 2 are higher, none of the differences are significant.

6.3.3. Discussion

Let us refer to Figure 6.1. The data displayed in this figure together with the F-ratio confirmed the basic finding of Experiment 1; i.e., the subjects' responses to the 11 TCS categories are significantly different and these differences cause different degrees of difficulty in acquisition.

In addition, the correlation coefficients found between the rank orders of the results of this experiment and the five hypotheses also duplicate the pattern found in Experiment 1. Therefore, the second finding is also verified, i.e., the semantic characteristics of the TCS categories and the influence from the learners' L1 are two major factors affecting the acquisition of TCSs.

There is a case of L1 influence in the data which was not predicted by Hypothesis 5. It is related to Category A3 (TtVS, as in *This afternoon came two people.*) and the category B3 (TpVS, as in *In the classroom sit many people*). In terms of structure, the two categories are very similar. The only difference is that the topics in A3 are temporal expressions while the topics in B3 are locative expressions. In Chinese, temporal expressions always have the same structure no matter what position they are in. For example,

(6.2) a. **Xiawu** lai le liangge ren.
afternoon come PRT two people

b. Neige ren **xiawu** lai le.
that person afternoon come PRT

For locative expressions, however, this is not the case. In topic position, locative expressions are usually in the form of NPs (as in (6.3a) below),

while in other positions, they are usually designated by prepositional phrases with *zai* (as in (6.3b) and (6.3c)):

(6.3) a. **Jiaoshi-li** zuo le henduo ren.
classroom-in sit PRT many people
Many people were/are sitting in the classroom.

b. Henduo ren zuo **zai jiaoshi-li**.
many people sit ZAI classroom-in
Many people were/are sitting in the classroom.

c. Ta **zai** **jiaoshi-li** zuo zhe.
he ZAI classroom-in sit PRT
He was sitting in the classroom.

Based on the structural change involved in the use of locative expressions, it was hypothesized that category B3 would be acquired later than A3 (cf. Hypothesis 4 in Table 4.5)[46]. However, this was not borne out in the results. What was observed in the translation data is just the opposite of the hypothesis, that is, despite the structural change involved in B3, the subjects' average score for this category is significantly higher than that of A3.

To seek an account, I looked at the possibility of L1 transfer. It was found that, although category B3 was judged unacceptable in English by native English speakers, sentences with a similar structure do exist in the language, for example, *Here comes the bus* and *On the sofa was sitting a big fat bear*. In these sentences, locative expressions are at the beginning of the sentences while the subject is in post-verbal position, the same as the structure of B3. Although such sentences may be relatively infrequent, restricted in use and, thus, considered "marked" in English to some degree, the simple fact that they do exist in the language may trigger some kind of familiarity when English speakers encounter the same structure in Chinese. This may have helped their acquisition of B3.

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[46] The other 4 hypotheses either predicted that B3 is more difficult than A3 or they have the same degree of difficulty.

Now let's refer to Figure 6.2. The fact that the subjects obtained higher scores for judgment than for translation suggests that the learners acquire the ability to recognize appropriate structures before they can actually produce them from scratch. Making judgments on a structure is easier than producing the structure. Therefore, a learner's ability to make judgments on a structure is not equal to his or her ability to produce the same structure for the purpose of communication. In a sense, this is reasonable because recognition usually requires less effort than production. However, with this point in mind, a question arises: If the ability to make judgments is not equal to the ability to produce the structure, do judgmental data tell us anything about the learners' interlanguage knowledge structure at all? The data of the present study seem to point to a positive answer, because the results of the judgment task in the present study are correlated with the results of the translation task. We can thus infer that, although the compatibility between the two tasks varies from item to item or category to category, the general structure of knowledge can be projected from the learners' performance in one type of task to another.

Provided that the ability to recognize a good structure is not always acquired together with the ability to produce the structure in appropriate situations, another question can be asked; i.e., when is the time for a structure to be considered as part of a speaker's knowledge, when the structure can be correctly identified, or when it can be correctly produced, or both? I believe that the answer to this question could vary according to the specific questions a particular study is aimed to answer. For SLA which inevitably emphasizes the ability to use the L2 for communication, the complete acquisition of a structure must include both of the abilities.

Looking at and comparing the 4 categories that received significantly higher scores in the judgment task (i.e., C1, A3, B2 and D1), one can not find anything in common exclusively for them. Therefore, the higher scores of the judgment task, or the lower scores of the translation task, for these 4 categories may not be explained by a single factor. However, the fact that the scores for the judgment task are in general higher than the scores

for the translation task can be accounted for. I would like to provide some explanation here.

The first possible explanation that comes to mind is that a judgment task requires fewer mental resource, so that subjects may have more things available to base their judgments on. What the subjects did in a judgment task is presumably this: They read the context first, and then read the sentences to be judged while keeping the provided context in their short-term memory. Right after that, they could decide immediately which sentence "sounded better" or which sentence they felt fit better into the context. Consequently, the judgments they made would tend to be more appropriate for the context. In a translation task, after the subjects read the context, they read the vocabulary provided for translation. Then, they had to recall the grammatical rules they had learned in order to put the words in the right order. When they were doing this, the context they had read before was quickly vanishing, leaving them nothing but the grammatical rules and the canonical word order to go by.

I strongly believe that there is a period in L2 development in which the learners have some kind of intuition for the appropriateness of a structure, but, due to their proficiency level, or maybe also due to the insufficiency of the input, the limited intuition may not yet be strong enough to help them produce the structure in the target language. When they have to build up a sentence from scratch (especially during a test), their attention is more focused on following explicit rules and being grammatically safe. This may explain why they can do judgment better than translation or other production tasks. If this is the case, then, a stronger tendency should be observed in the translation task to use the canonical word order of Chinese. This, actually, is exactly what happened in the present study (see further discussion on word order in the next section)[47].

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47 This may also have something to do with explicit grammar teaching in language instruction. The issue of teaching will be discussed in section 7.5.

6.4. Errors Analysis - Word Order

Since Experiment 2 obtained production data, a large variety of word orders was used in the subjects' responses. An examination of the word order and the errors made may tell us a great deal about the learning process and the strategies used in the acquisition. Thus, the following section will report on the error analysis conducted for the translation data.

6.4.1. Recognition and Description of Error Types

Erroneous responses for the translation in Experiment 2 were categorized in terms of word order. The focus was on whether the responses fell into one of the three types of errors shown in (6.4) below. Errors that could not be categorized in these terms and responses with more than one type of error were put into a miscellaneous group.

(6.4) Three Types of Word Order Errors in Experiment 2 (Translation)

Type 1: English order transfer (only acceptable in English, not in Chinese);
Type 2: grammatical for both English and Chinese (but inappropriate for the given context); and
Type 3: Chinese canonical order (inappropriate for the context, not acceptable in English).

The three types of errors are exemplified by the following examples. For the context in (6.5), (6.5a) is the correct translation. (6.5b)-(6.5d) are considered as erroneous responses:

(6.5) Examples for Word Order Errors in Translation:

Context: Rob: "This book is very interesting. Have you read it before?"

Sue: "I have read this book before."

A. Correct translation:

Zheiben	shu	wo	yiqian	kan	guo	le.
this	book	I	in-the-past	read	PRT	PRT

B. **Type 1 error**: Wo kan guo zheiben shu yiqian.
I read PRT this book in-the-past

C. **Type 2 error**: Yiqian wo kan guo zheiben shu.
in-the-past I read PRT this book

D. **Type 3 error**: Wo yiqian kan guo zheiben shu.
I in-the-past read PRT this book

6.4.2. Results

The categorization of errors in terms of word order described above produced the following results: Types 1, 2 and 3 errors took up 73.8% of the total erroneous responses; the category of miscellaneous errors took up 26.2%. If we ignore the mixed bag, the distribution of Type 1, 2 and 3 errors is shown in the following figure:

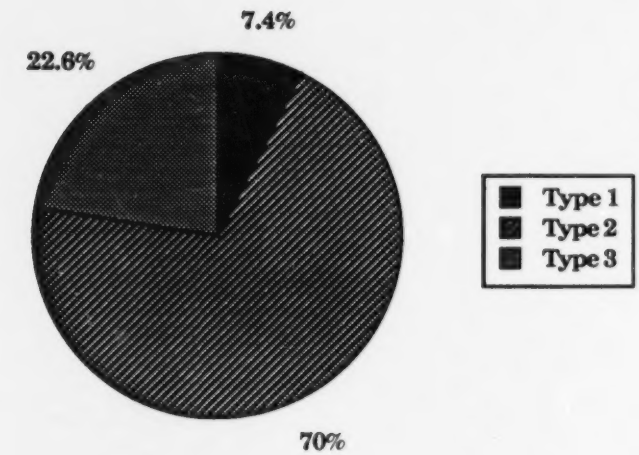

Figure 6.3: Experiment 2 -
Distribution of Word Order Error Types

As Figure 6.3 indicates, the number of occurrences for Type 1 errors is the lowest, while the number of occurrences for Type 2 errors is the highest. The overall difference among these types is significant ($F(2,48) = 166.202$, $p < .0001$).

In order to see the frequency of error types made by the subjects on different proficiency levels, Figure 6.4 was obtained:

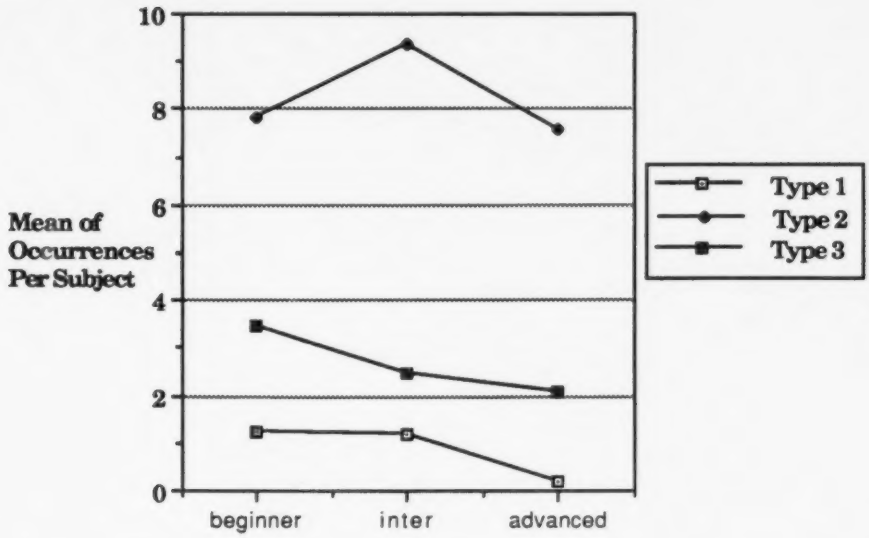

Figure 6.4: Experiment 2 -
Word Order Errors on Different Proficiency Levels

Figure 6.4 shows a general decline in the occurrences of errors from the beginning to the advanced level, with the exception of the Type 2 errors. The number of Type 2 errors increased from the beginner to the intermediate level. I will discuss the explanation for this in the next section.

6.4.3. Discussion

Based on the pervasive L1 influence observed in L2 learning reported in earlier literature and the claim that L1 influence is the strongest at the beginning stages of acquisition (Major, 1987), it was expected that a large percentage of the errors made in this experiment would be Type 1 errors (i.e., English order transfer), especially at the beginner level. This, however, turned out not to be the case for this experiment. On the contrary, as Figure 6.4 indicates, Type 1 error occurred most infrequently for all the three levels, taking up only 7.4% of the total number of word order errors.

A more careful examination of the test stimuli reveals that this should actually not be surprising. Type 1 errors represent English word order transfer that is not acceptable in Chinese. Due to the fact that English and Chinese have the same basic canonical word order of SVO and the fact that this study only investigates simple and basic sentence structures, there are only two kinds of errors possible for Type 1. One is the placement of temporal or locative expressions in sentence-final position (as in (6.5b) *I read this book **in the past***.). This is a very conspicuous error in Chinese usually made by learners at the very beginning stage of acquisition. The second kind of error possible concerns nouns modified by a PP such as *the carpet of the living-room*. In Chinese, the modifier has to be put before the modified noun, as in (6.6a). (6.6b) is unacceptable:

(6.6) a. keting de ditan
living-room MOD carpet
carpet of the living-room

b. * ditan de keting
carpet MOD living-room

An error of English order transfer such as (6.6b) is also very conspicuous in Chinese. Such errors are absolutely not tolerated from the first day of language instruction. In a natural learning environment, such Type 1 errors do not persist either. In the present study, since all the subjects had learned Chinese for at least 6 months, it should be expected that most of them had passed the initial stage where such errors are common.

In the data, one can also see that, while the number of Type 1 errors is fairly low, the number of Type 2 errors is very high. Type 2 errors involves the use of word order that is acceptable in both Chinese and English. This type of errors suggests that the subjects were aware of the word order similarity in the two languages and trying to use this knowledge to facilitate their learning of L2 or, at least, to assist the completion of their task. An interesting point regarding this phenomenon is that, if only grammaticality is concerned, Type 2 errors could be "positive transfer", because the subjects were using their L1 knowledge to produce grammatical sentences in the target language. The large number of this

type of errors indicates the large extent to which their L1 knowledge was applied.

If we only consider grammaticality and treat Type 2 errors as positive transfer, it will also not be difficult to understand the considerable increase in this type of sentence from the beginner to the intermediate level, because this is when the learners discover the similarity between the two languages. This is also when they need this knowledge to facilitate their production. Later, as they move on to the advanced level, they will acquire more knowledge and intuition of the appropriateness of structures within discourse context. The evidence for this can be seen in the decrease of the Type 2 errors from the intermediate to the advanced level shown in Figure 6.4 above, and the significant increase in their grammatical and appropriate responses which will be further discussed in the next chapter.

When analyzing word order errors, another overwhelming phenomenon was observed, that is, for TCS categories C, D and E, the majority of the errors made are in SVO order without using a distinct topic at the beginning of the sentences. This suggests that the learners may be relying on the SVO order in their L2 production, while they had not acquired the use of the TCSs yet. For this, it is hard to determine whether it is L1 transfer because Chinese and English have the same canonical word order. However, it is very probable that the fact that Chinese and English have the same canonical word order has reinforced the use of this order in the learners' production.

Before I close this section, I would like to say something more about language transfer. The discussion in this section suggests that whether transfer is positive or negative also depends, at least in part, on the learning task. If we assume that grammaticality is the focus of learning in the first stage after which the focus is moved to appropriateness (as I think is the case for most learners in classroom environment), an utterance with a Type 2 error would be considered a positive transfer for the first stage and a negative one for the second stage. If we consider both grammaticality and appropriateness, there could be two types of negative transfer. One type

causes ungrammatical utterances; the other type produces sentences that are grammatical but inappropriate for the context.

6.5. Summary

In this chapter, Experiment 2 of the present study is reported. The translation data obtained from the subjects' responses to the 11 categories confirmed the basic finding of Experiment 1, i.e., the subjects' performance for the TCS categories are significantly different. This implies that there are differences in the structures of the 11 TCS categories which cause different degrees of difficulty in leaning.

The analysis also confirmed the two important factors influencing the acquisition of TCSs identified in Experiment 1, i.e., the semantic characteristics of the TCSs and the influence from the learners' L1.

In general, the subjects performed better in Experiment 1 (judgment task) than in Experiment 2 (translation task). The scores of the two experiments were correlated but the differences were not significant. This indicates that both the judgment and the translation tasks reveal learners' interlanguage knowledge and their abilities to use the knowledge in discourse, although they do so in different ways.

The fact that the subjects' performance was significantly better for some categories in the judgment task can be explained by two major points. First, since a judgment task is less demanding, the subjects may have more resources available for their judgments, e.g., their implicit knowledge (or "feel") of a structure, which is not necessarily available for production. This, of course, presupposes a stage in learning prior to the complete acquisition of a structure. At this stage, learners' knowledge is more implicit and intuitive; the application of the knowledge is limited with greater degrees of intra-subject variability from task to task. This explanation seems to be especially plausible for the acquisition of discourse-related structures such as TCSs.

The second account for the higher scores in the judgment task has to do with the psychological characteristics of the procedure in the two types of tasks. I reasoned that, in the translation task, there may be more experimental and/or psychological steps intervening between the time when the context is read and the time when the decision on word order is made. This could set a distance between the context and the word order used in translation and make them less compatible.

The results of the error analysis of word order showed that the majority of errors made are utterances that are grammatical but inappropriate for the context. Combined with the results from Experiment 1, it seems that, due to the simple predications covered by the present study and the proficiency levels of the subjects, grammaticality is not a major problem. It is the appropriateness of the TCSs that is not only difficult for the learners but also shows the greatest progress in the acquisition.

Now, after presenting the results and discussing the issues that are closely related to the results of the two experiments, I would like to distance myself somewhat from the data and consider other more general issues that the present study may have bearing on. This will be the content of Chapter Seven.

CHAPTER SEVEN
Discussion of Other General Issues

7.0. Introduction

In Chapter Five and Six, the two experiments carried out in the present study were reported. In the discussion in those two chapters, I left out the issues that require the integration of the results from both of the experiments. I also kept theoretical and pedagogical issues for a separate chapter. Now, it is the time for me to pursue a discussion of these issues.

Let us recall first that the subjects who participating in the present study were divided into three proficiency levels according to their general knowledge of Chinese. In the discussion of the previous two chapters, the general proficiency levels were referred to only briefly in the error analysis. Since one of the major research questions of the present study concerns the performance of the subjects on different proficiency levels, I will start this chapter with a discussion of this topic based on the results from the two experiments (section 7.1). Then, I will move on to a discussion of issues in SLA (section 7.2), issues in the analysis of TCSs (section 7.3), methodological issues (section 7.4) and pedagogical issues (section 7.5).

7.1. Subjects on Different Proficiency Levels

The present study claims that TCSs constitute an important part of the acquisition of Chinese as an L2. If this stands, it would be expected that learners whose L1 is not topic-comment would find TCSs more difficult at early stages of acquisition. As they progress in the acquisition of the language in general, their performance on TCSs would also improve. In order to find out whether this is the case, the analysis of the present study compared the subjects' responses to the TCS categories with their general

proficiency levels. It also looked at the between-subject variable to see whether there is a progressive development in the use of TCSs.

7.1.1. Results

The subjects' scores of the 11 TCS categories from Experiment 1 and Experiment 2 were first combined with the information on their proficiency levels to calculate the mean and standard deviation for each proficiency level. The results are shown in Table 7.1 below. In this table, the column "Mean Score" shows the average score of each proficiency level out of a total of 44 (2 for each of the 11 TCS categories in each experiment):

Table 7.1: Proficiency Levels and TCS Scores
(Experiment 1 and Experiment 2 Combined)

Prof. Level	Mean Score	S. D.	Range in %
Beginner	8.176	2.675	7% - 27%
Intermediate	13.625	3.462	13% - 46%
Advanced	20.188	5.231	23% - 66%

As can be seen from Table 7.1, there is consistent progress in the subjects' mean scores from the beginner to the advanced level. A one-way analysis of variance revealed an overall significant difference among the levels ($F(2, 48) = 38.861$, $p = .0001$).

Figure 7.1 and 7.2 below display the subjects' improvement on the 11 TCS categories in line charts:

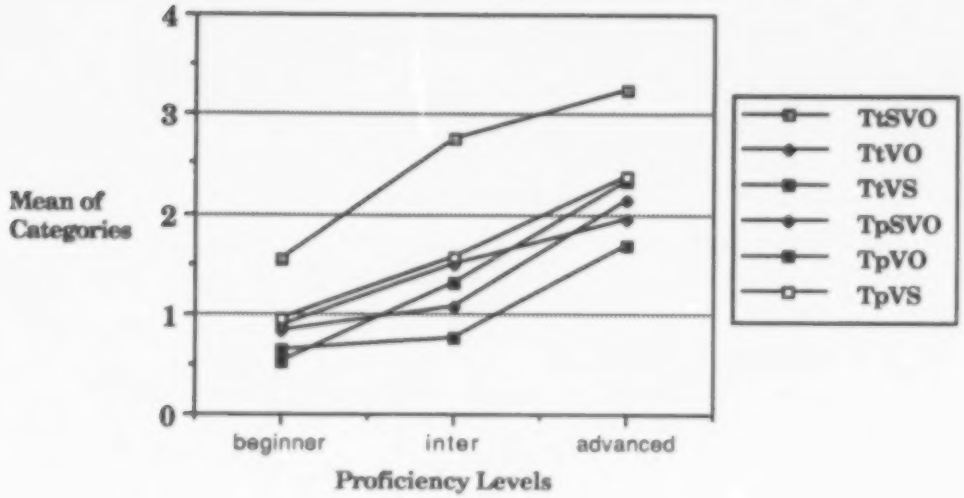

Figure 7.1: TCS Categories and Proficiency Levels

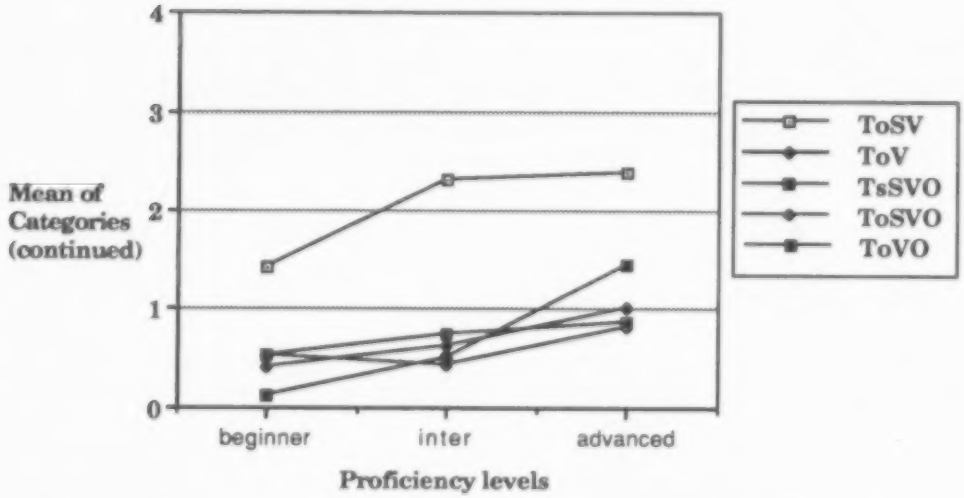

Figure 7.2: TCS Categories and Proficiency Levels (continued)

7.1.2. Discussion

As displayed in Figures 7.1 and 7.2, except for a slight decrease in the score for the category E1 (i.e., ToSVO) between the beginner and the intermediate level, there is otherwise consistent progress in the use of TCSs from the beginner to the advanced levels. Since the proficiency levels reflect the subjects' general knowledge of Chinese, this shows that the acquisition of TCSs proceeds along with the acquisition of other aspects of the L2 system. This can be taken as the evidence to support the claim that the use of TCSs forms part of the acquisition task for learners of the language.

Looking at the last column in Table 7.1, however, one cannot but notice the large range in percentage covered by each proficiency level. What this tells us is that there is a great deal of variation in the performance of the subjects on each proficiency level. For example, the percentage for the advanced level even overlaps with the percentage for the beginner level. A natural question that can be asked at this point is what can be the cause(s) for such large differences and make the use of TCSs deviate from general proficiency.

When looking for an answer to this question, I again examined the characteristics of TCSs, i.e., the involvement of not only grammaticality, but also the appropriate use of the structures in discourse contexts. I believe that, between the two aspects, the acquisition of grammaticality, due to its very nature, is more closely related to the acquisition of other aspects of the language system in general. It is the acquisition of appropriateness that is more likely to deviate from general proficiency. Such deviation, however, may not be observed equally in all learners. Some learners, for one reason or another, may have better discourse strategies when other aspects of their L2 are less developed, or vice versa. If this is the case, then, further speculation can be made on the causes of such individual differences. It could be that the acquisition process of TCSs relative to other aspects of acquisition can be determined or modified by factors such as learning style, focus of study and/or learning environment. There is reason to believe that learners in natural learning environments would

have better discourse strategies than those in classroom environments. The evidence for such a belief, however, calls for further studies that compare these two types of learners.

Another reason that the subjects' responses to appropriateness is less accurate than their responses to grammaticality may have to do with the discourse-related nature of appropriateness. Appropriateness involves discourse consideration such as maintenance of topic, avoidance of repetition and so on. As the result, rules of appropriateness of word order are not clearly defined as grammatical rules are. Such that for a certain context, there is usually one structure that is the most appropriate, with a few others that are inappropriate, but to different degrees. The fact that the inappropriate sentences are all grammatical makes them more tolerable than ungrammatical sentences. Examination shows that native speakers of Chinese usually agree on the most appropriate structures for different contexts, but they may differ in the degrees of tolerance for the structures that are less than perfect.

The contextually-determined nature of appropriateness and the fact that inappropriate sentences are grammatical if taken out of the context may have another consequence, that is, an error in appropriateness is less conspicuous than an error in grammaticality. During the experiments, if the subjects' attention was distracted from the context, their responses may be inappropriate, but still grammatical. This may be another explanation for the scores of appropriateness being lower than the scores of grammaticality.

Some of the features of appropriateness of word order discussed in the last few paragraphs may affect not only the performance of L2 learners, but also the performance of the native speakers of Chinese as well. Table 7.2 below displays native speakers' responses to the 11 TCS categories investigated by the present study[48]:

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48 Twenty native speakers of Mandarin Chinese varified the test items for the present study, 14 for the translation task and 6 for the judgment task. Table 7.2 shows the conbined results from both of the tasks.

Table 7.2: Native Speakers' Responses to the 11 TCS Categories

Categories:	A1	A2	A3	B1	B2	B3	C1	C2	D1	E1	E2
Accuracy %:	93	98	100	95	95	95	98	98	95	93	95

As we can see from Table 7.2, although the percentages of accuracy for the TCSs are very high (at least 93%), the native speakers did not respond unanimously to all the TCS categories. During the debriefing right after the completion of their task, the native speakers all agreed that the expected answers were the most appropriate. They accounted for their inappropriate responses by saying that they were not carefully enough at the time, or their responses were "also okay". The fact that all their erroneous responses are grammatical but inappropriate indicates that native speakers' performance on the appropriateness of word order is more variable than their performance on grammaticality. This shows that even native speakers of a language vary in pragmatic skills, which is an important point to be considered in empirical studies involving pragmatic skills.

In the discussion of the previous two chapters, I briefly mentioned that the subjects performed poorly in both of the experiments. Table 7.1 indicates that even the subjects at the advanced level did not score very high (average at 46%, with the highest of 66%). In addition to the explanation given above concerning the grammaticality vs. the appropriateness of the TCSs, this also suggests that the use of TCSs in appropriate contexts is a difficult aspect for the acquisition of Chinese. Now, it is time to explore for an explanation.

At first, a quick look at the TCSs covered by the present study seems to suggest that these sentences should not be difficult, because they have simple structures with simple vocabulary. However, when further efforts were made to identify the causes of the difficulty, one thing stood out, that is, for each TCS investigated, there is a corresponding structure which not only conveys roughly the same meaning, but also conforms to the canonical word order of Chinese. Sometimes they even coincide with the order in

English. These would be the so-called "unmarked" structures for the learners. For example,

(7.1) a. Na liangfeng xin wo yijing jile.
Those two letters I already mailed.

b. Wo yijing jile na liangfeng xin.
I already mailed those two letters.

(7.2) a. Youxie wenzhang wo huanle timu.
some articles I changed title

b. Wo huanle youxie wenzhang de timu.
I changed some articles DE title

(7.3) a. Wode tongxue nande dou zhaodao gongzuo le.
my classmate male all found jobs

b. Wode nande tongxue dou zhaodao gongzuo le.
my male classmates all found jobs

In the examples (7.1)-(7.3), sentences in (a) are TCSs; sentences in (b) are in canonical Chinese word order which are also acceptable in English. In L2 production, the learners, especially those at beginner and intermediate levels, would be tempted to use the unmarked structures in (b), either because those are the structures they internalized first as the standard word order of Chinese, or because those are the structures they are more familiar and confident with, or both. The fact that all these sentences are grammatical and that (a) is only sometimes better than (b) due to the subtlety in appropriateness may be something difficult for L2 learners to grasp. Personal teaching experience reveals that subtlety in appropriateness may not be the first thing the learners pay attention to at the beginning stage of acquisition. Usually, grammaticality has a priority at first. Later on, when grammaticality is under better control, the focus of attention will be shifted to appropriateness of structures. This, I believe, is the case for most learners, especially those who learn the language through classroom instruction. Since most of the subjects participated in

the present study belong to this group, it is very probable that appropriateness, rather than grammaticality, has contributed to the difficulty for these learners.

Among the very few studies that observe the use of TCSs, the difficulty in using TCSs was also noted by Xie (1992). As part of his study, three Chinese interlanguage speakers of "superior level" were observed in their production of topic-prominent features. The Chinese narratives of these three subjects were so fluent that even experienced raters who were not aware of their background rated them as native speakers of Chinese. However, it turned out that their indices of "the topic-prominence of interlanguage does not come close to the level of native speakers" (p. 98).[49] This observation, combined with the results of the present study, suggests that the subtlety in the use of TCSs for appropriateness may be one of the aspects that is difficult for the learners. It may also be the aspect that prevents learners' interlanguage from reaching the level of native speakers' production.

7.2. Issues in SLA

To begin a discussion on the status of TCSs in SLA, let me recapitulate the contradictory claims made on the characteristics of early stages of L2 acquisition discussed earlier in section 3.4. On the one hand, it has been claimed that the sentence structure at early stages of L2 can basically be characterized as topic-comment, the same as early stages of L1 (Fuller and Gundel, 1987). On the other hand, it has also been claimed that there is suppression of topic-comment structures in the L2 production of Chinese by speakers whose L1 is English (Xie, 1992). Based on the observation in the present study, some explanations can now be proposed.

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[49] Based on this observation, Xie (1992) proposes that the indices of topic-prominent features should be used as one of the criteria in proficiency rating of Chinese interlanguage, which apparently was not used before.

A survey of the language acquisition literature and a comparison of the studies involved in the different claims reveal that "topic-comment" has been used as a cover term for a variety of features and structures. For example, the claim that early L1 is topic-comment is based on the observation that the utterances in early childhood consist of a topic followed by comment without the grammatical features usually observed in adult language. The fact that this topic-comment stage is prior to the appearance of grammatical features also led to the assumption that topic-comment utterances require very little effort and input to learn.

For the claim that early stages of L2 are also topic-comment, Rutherford's assertion (1983) that ESL production progresses from being more topic-comment to more subject-prominent is based on his observation in the coding of 'subject'. Fuller and Gundel's claim (1987) of a universal topic-comment stage in interlanguage development is based on an investigation of a number of topic-prominent features (sentence-initial coding of topic, double subject construction and zero-NP anaphora) and subject-prominent features (subject-creating constructions, dummy subjects and subject-verb agreement).

The contradictory claim that there is a suppression of topic-comment features in L2 acquisition by speakers of English (Xie, 1992) is based on the learners' use of four topic-comment structures: topicalization (e.g., *This book, I have read Ø.*), zero anaphora (e.g., *This book is difficult, I do not understand Ø.*), double nominative construction (e.g., *China, I have been to Shanghai.*) and left dislocation (e.g., *Mr. Wang, he went to Beijiing yesterday.*)[50].

As can be seen, these claims are all based on the use of "topic-comment" structures at early stages of language development, L1 or L2. Yet, the evidence supporting these claims comes from studies of a large variety of features and structures. Since TCSs differ significantly in their

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50 Again, for the convenience of the readers, I use English vocabulary to illustrate Chinese sentence structures. To be exact, please refer to Xie (1992) for examples in Chinese.

syntactic and semantic characteristics and cause different degrees of difficulty in learning, as evidenced in the present study, it is very probable that the discrepancy in the claims is caused by treating TCSs as a homogeneous group while they are actually not.

Studies have shown that topic-comment is not a property that a language either has or doesn't have. Topic-comment is a language universal (Gundel, 1987). But its features are substantiated in a number of structures with different semantic, syntactic and phonological characteristics. Some languages have more of these features while others have less. Thus, whether a language is topic-prominent does not depend on whether TCSs exist in the language, but depends on the extent to which TCSs are utilized as well as the occurrence or non-occurrence of a number of topic-prominent features specific for topic-prominent languages (as discussed in section 2.4).

Therefore, in the analysis of TCSs, there is a need to distinguish "topic-comment features", which is a cover term for all the structures with a topic followed by some comment, from the term "topic-prominent features", which refers specifically to those TCSs common only in topic-prominent languages. Topic-prominent features are, by nature, topic-comment features, but the reverse is not necessarily true. Languages with topic-prominent features are more topic-prominent than those without.

This gradient notion of topic-prominence (for the lack of a better term) also applies to language acquisition. At different stages of learning, learners' production may display different topic-comment features. As has been shown by the present study, easier TCSs are acquired in earlier stages, while the more difficult ones are acquired in later stages. Early stages of L1 are claimed to be "topic-comment" not because all the TCSs possible (including those with topic-prominent features) are used at this stage, but because the stages display a number of topic-comment features (although simple in structure) relative to the absence of the subject-prominent features. The TCSs used at different stages of learning may also depend on the nature of the L1 and the L2. The learners with topic-

prominent L1 background may produce sentences with higher degrees of topic-prominence at beginning stages than learners whose L1 is subject-prominent.

Based on the large variety of TCSs that exist across languages and the distinction between "topic-comment features" and "topic-prominent features", claims made by linguistic studies, theoretical or empirical, should be stated with respect to the types of structures investigated. For the acquisition of Chinese by English speakers, for example, in order to make claims on the use of TCSs in general, a full range of TCSs that cover from the lowest to the highest degrees of difficulty should be investigated. Due to the different degrees of difficulty among the TCSs observed in the present study, it is not surprising that the TCSs that are relatively difficult (e.g., topicalization, double nominative, and cleft construction) are not used by learners in early stages of acquisition. Actually, it is very probable, and reasonable as well, that early L2 learners of Chinese (even English L1 speakers) use less complex TCSs from the very beginning stage of learning.

This discussion leads to a general view of language acquisition and how previous knowledge is utilized in the acquisition process. I believe that the topic-comment feature observed at the beginning stage of L1 is a language universal. The topics are always agent or experiencer at the same time. From there, language acquisition proceeds according to what kind of input the learner receives. Referring to Figure 7.3 below, "A" represents the beginning stage of L1 acquisition. A child in a Chinese environment will go in the direction of A-B; a child in an English environment will go in the direction of A-C. When the acquisition task is accomplished or nearly accomplished, a Chinese speaker would have acquired complicated TCSs (with all the topic-prominent features) but less syntactic and morphological rules. An English speaker would have learned complicated syntactic and morphological rules with less TCSs (more basic ones).

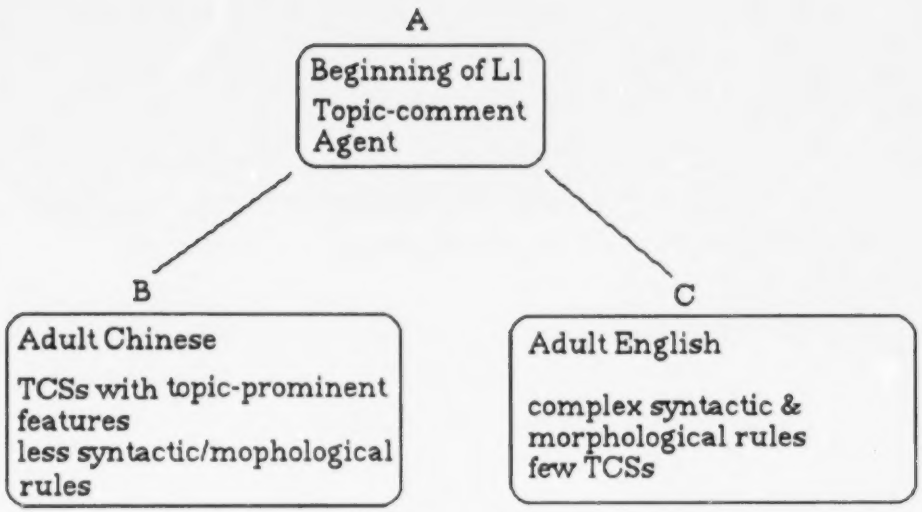

Figure 7.3: TCSs and Language Learning

In L2 acquisition, the learners start with a combined knowledge of A&C or A&B, depending on their L1, plus their conscious or unconscious awareness of the markedness of L1 structures. Then, they proceed towards the system of L2 based on the input they receive. The topic-comment features observed at early stage of L1, as part of the language universals, should also be observed in the universal topic-comment stage in L2 acquisition claimed by Fuller and Gundel (1987).

Looking at the acquisition of Chinese from another perspective, there seem to be two dimensions in the acquisition of Chinese sentence structure by English speakers, both related to word order. One is in the direction of "pragmatization", so to speak, which includes the acquisition of TCSs and organizing isolated individual sentences into more structured discourse (by using topic chains, for example). The other dimension is the acquisition of other grammatical rules of Chinese, including the premodifier position for nouns and verbs, the use of postverbal complements, the use of aspect markers and so on, in the direction of "syntactization".

7.3. Further Research Questions for the Analysis of TCSs

The issues discussed in the previous chapters are related to some further questions in the analysis of TCSs:

a) What structures are topic-comment and what are subject-predicate? Is there a clear division?

b) Is "topic" or "topicality" a gradient notion? If it is, what constitutes higher or lower degrees of topicality?

c) What are the conditions for the use of different TCSs?

Although these are important and very basic questions, they are also the questions that the analyses of TCSs at the present state do not provide answers for. Due to the large number of related issues, I am afraid that I am raising more questions than I can answer. But, since raising a question is the first step in answering it, I would like to take this first step and offer some of my present view on these issues, even though I may end up asking even more questions.

I would like to start with the first question, i.e., whether "topic-comment "and "subject-predicate" are dichotomous notions and structures. Generally, as we know, the notion of subject-predicate is defined in the domain of syntax and the notion of topic-comment is defined pragmatically. A topic-prominent language such as Chinese, however, can be an exception. We have seen in the discussion in Chapter Two that topic is a notion that needs to be used in the analysis of Chinese sentence structure. It has also been proposed that since Chinese does not have the subject-prominent features such as inflectional morphology, subject-verb agreement and subject-creating constructions, the syntactic notion of subject may not be used in the analysis of Chinese. Lexicon can be arranged based on pragmatic information only. Therefore, syntactic considerations are non-existent in Chinese (LaPolla, 1993). This is a fundamental issue in the analysis of Chinese. If, and only if, this has been justified, the possibility that subject-predicate structures do not exist in Chinese can be considered.

Now, let's consider English. In English, utterances in child language such as "Mommy go" are considered topic-prominent because there is no evidence for syntactic consideration (Gruber, 1967; Owens, 1988). "Mommy goes" is considered subject-predicate. The question is whether "Mommy goes" can also be topic-comment at the same time. A negative answer to this question would be difficult to justify especially if the utterance occurs in a larger context such as "Mommy goes, Daddy doesn't go". Thus, it seems that topic-comment and subject-predicate cannot be dichotomous notions. There is overlap between the two.

Based on the view that topic and subject may overlap in one position, we can infer that NPs in a topic position may have different degrees of topicality: a) topic that is not subject, which may have the highest degrees of topicality; b) topic that is also subject, which has a lower degree of topicality and c) an NP that is subject but not topic, which has a zero degree of topicality. In addition to NPs, other phrasal types can also serve as topics, as I have shown in (2.3) and (2.4) in Chapter Two. Then, at least one more question can be asked: Do other phrasal types define topicality less strongly than NPs? In Chapter Two, I mentioned that topicality has a prototype structure (Oosten, 1986). But what are more prototypic topics and what are the factors involved in defining different degrees of topicality? These are some of the questions to be answered.

There is at least one more type of structure that may have an impact on topicality, i.e., the so-called secondary topics as analyzed by Tsao (1990) exemplified in earlier sections 2.4.2.2 and 2.4.2.3. Secondary topics can also be designated by different phrasal categories. If the analysis of secondary topics is justified, then, even more questions can be asked: Do secondary topics define topicality less strongly than primary topics, as one would assume? Is a sentence with a secondary topic more topic-comment than a sentence without one (which would also presuppose a gradient notion of topic-comment)?

I am aware that the answers to these questions require a large amount of detailed research. But only when we have refined and unified definitions and measurements for the analysis of topicality and TCSs can we claim cross-linguistically and accurately on the degrees of topic-prominence of languages.

In addition to the above questions, two important aspects concerning the use of TCSs are not described by the present study and require further research. One is the specific conditions for the use of the TCSs. This can be studied both for theoretical analysis and for pedagogical purposes. The other is the frequency of use of the TCSs. Intuitively, all the 11 categories are used frequently in Chinese. But, solid work needs to be done which may reveal differences.

7.4. Methodological Issues

I believe that the present study obtained valid results to make claims about the subjects' knowledge of the range of TCSs investigated by the study. The validity can be discussed with respect to the following aspects.

The 11 TCS categories established by the present study cover the full range of TCSs for the sentence types specified. By doing so, the study was able to measure a representative sample.

Each of the 11 categories was tested four times to increase the reliability of the scores. Since all subjects participated in both of the experiments, the results are relevant not only to the subjects' ability to recognize appropriate structures for different discourse contexts, but also to their ability to produce different structures. Therefore, the subjects' knowledge structure of the TCSs is reflected in the results.

I also believe that the design of the present study is appropriate. It obtained relevant data by minimizing confounding variables as much as possible. For empirical studies in general, one criticism of using judgment

data is that subjects are likely to bring in a number of test-performing strategies such as guessing and balancing between positive and negative answers. The judgment task of the present study was designed in such a way that four possible judgments could be made for each stimulus. Thus the possibility of picking the right answers without any relevant knowledge is greatly reduced. Another criticism for using metalinguistic data is that subjects' judgments may not be based on what is tested. For example, subjects may judge a sentence to be difficult due to unfamiliar vocabulary while the focus of the test is on syntactic complexity. In the present study, the subjects were told overtly that they should focus on word order. In the translation task, what they were told to do was to arrange the provided vocabulary into a certain order without using extra words; in the judgment task, each set of stimuli for them to make judgments on had very similar vocabulary with variation only in word order. Therefore, the subjects' judgments could only be made according to their knowledge on word order and the use of TCSs.

One thing observed in the present study that awaits further explanation is the within-subject variation in the performance. The subjects did not perform consistently for the two items of each TCS category in a task, nor for the corresponding items in the two tasks. One explanation could be that the subjects' knowledge level of TCSs is fairly low. When they are uncertain about a structure, their performance on this structure is more likely to vary from time to time. A second possible explanation could be that discourse structures do not have concrete rules as grammatical structures do. Very often, one has to follow his or her own intuition. When performing in a metalinguistic task, the subjects may have a feeling of being tested and, therefore, be more aware of or more concerned about being "correct". They may tend to follow strict rules whenever they can, just to be "on the safe side". Such a tendency may also vary for different tasks. Due to these reasons, I suspect that judgment tasks and production tasks will always produce inconsistent results, especially when the subjects' knowledge level (and therefore confidence level) is low.

Since the use of metalinguistic data has generated extensive debate in the field of SLA, I would like to further discuss the reason and the advantages of using metalinguistic data in the present study. The rationale for the use of metalinguistic data in the present study is that the present study covers a large variety of TCSs. If only a natural production task was used, the subjects would have the freedom to choose the structures they were familiar with and avoid the ones that have difficulty with. Thus, the difficulty of some structures may cause the non-use of these structures in the data. As the result, the use of a natural production task may not produce enough tokens for an adequate analysis of all the TCS categories investigated.

In order to see whether avoidance (cf. section 3.2.2.) could be a possibility in L2 production of TCSs, I checked Xie (1992), the only study found so far on the use of topic-comment features in L2 Chinese production. In this study, a production task (story-telling) was used to observe four topic-comment features in Chinese: topicalization, zero anaphora, double nominatives, left dislocation and cleft construction. An error analysis of the data shows that the subjects made very few or even no errors on these features in their narrative production. Thus, the question becomes whether the lack of errors can be interpreted as a lack of difficulty. In order to find out the answer to this question, a closer look was taken at the occurrences of the topic-prominent features at various proficiency levels. It revealed that these structures were indeed used very infrequently. Table 7.3. below shows the mean number of occurrences of each feature observed on different proficiency levels:

Table 7.3: Mean Occurrences of the Topic-prominence Features in Learners' Interlanguage (Xie, 1992):

Prof. levels	TOP	ZA	DN	LD	CC
beginner	0.00	4.59	0.00	0.00	0.00
intermediate	0.00	10.75	0.00	1.42	0.00
advanced	0.84	18.94	0.44	1.74	0.00

TOP = topicalization ZA = zero anaphora
DN = double nominatives LD = left dislocation
CC = cleft construction

Table 7.3 indicates that, except for zero anaphora, other features either did not occur at all, or occurred very rarely in the data. This is true even for learners at the advanced level.

There could be two possible explanations. The first is that the subjects were aware of the structures, but they consciously applied an avoidance strategy due to the difficulty of organizing the sentences. The second possibility is that these structures do not exist in the learners interlanguage knowledge system at all. Since these structures are only related to discourse aspects of the language, L2 learners can make themselves understood and get along without using them. This may be especially true for the learners at beginner and intermediate levels, for whom, grammaticality is of primary concern. Since Xie's study uses natural production data from a story-telling task, there was no way to determine which of the above two possibilities was truly the case.

This is exactly the reason for the use of the translation and the judgment tasks in the present study. In the judgment task, different choices were provided to the subjects, which eliminates the difficulty of organizing the sentences. If a subject has the knowledge that a certain TCS is used in a certain context, he or she should have no difficulty in choosing the right answer. In contrast to the judgment task, the results from the translation task can tell us whether a TCS has been secured in the learner's interlanguage system because, only when a learner can produce

a structure automatically from scratch in an appropriate situation, can we say for sure that the acquisition of the particular structure is complete.

The results of the present study show that most of the learners (86%) performed better in the judgment task. Two points can be made here. One is that a judgment task may be easier than a translation task, which has been discussed before. The other is that the subjects may have avoided using the TCSs in the translation task consciously or unconsciously because of their lack of confidence. If this happened, the information obtained from the judgment task could still reveal some aspect of their knowledge on TCSs.

For the 10 percent of the subjects who got higher scores for the translation task than the judgment task[51], there are also two possibilities. One is that these learners may have acquired Chinese partly in a natural environment which usually enhances the communicative competence of the learners. The second possibility is individual differences which can be seen in the comment made by one of the subjects, "I never do well with multiple choices. They just confuse me".

The empirical part of the present study covered 11 TCS categories. It resulted in a specification of the degrees of difficulty and a sequence of acquisition for English-speaking L2 learners. Usually, different degrees of difficulty can be testified by using data in L1 acquisition as well as frequency count in texts (both oral and written texts) in addition to using L2 data. Up to the present, however, no such study has been reported on the use of TCSs. This, I believe, can and should be pursued in future research.

7.5 Pedagogical Issues

Discussion on language pedagogy always concerns the following issues: a) what should be taught, b) when to teach what, and c) how. For

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51 The rest of 4% of the subjects obtained equal scores for the two tasks.

the present study, the first question to be answered is whether TCSs should be taught explicitly in L2 instruction.

To date, there has been little research done on the acquisition of a topic-prominent language by learners whose L1 is subject-prominent. Investigation of the acquisition of TCSs is even more rare. In Chinese language pedagogy, despite the fact that TCSs reflect one of the most distinctive features of the language, TCSs have not been overtly taught in classrooms. In the research of L2 acquisition of Chinese, there has been no substantial study conducted on the acquisition of TCSs and how these structures could be best taught to L2 learners. The difficulty in teaching TCSs can be seen from a few perspectives:

First of all, there is the lack of theoretical analysis of TCSs in Chinese on which the teaching can be based. Grammatical analysis of Chinese has from the very beginning adopted the approaches and methods of the analysis of Indo-European languages. This has, at least to some extent, led the focus of analysis away from the identification and the investigation of some language-specific characteristics such as TCSs. Chinese L2 instruction has also adopted the methodology from teaching Indo-European languages with primary focus on grammatical rules. It has not been widely recognized that focusing on grammatical rules may be reasonable for teaching languages such as English that have rigorous grammatical rules, but may not be the best method for a language like Chinese whose sentence structure is to a large extent contextually determined.

Teaching grammatical points is relatively easy, because they are usually specific and can be easily summarized into rules. These rules set clear boundaries between grammatical and ungrammatical sentences. They are easier for instruction and for students to follow. The use or non-use of a discourse structure, on the other hand, does not always concern the "right" or "wrong" of a sentence, but pertain to a more or less appropriate way of expressing certain meaning. This raises the question of whether the use or non-use of a discourse structure constitutes an "error". The answer to this question could be controversial at times. I believe that the answer

also depends on individual cases and would very often be a matter of degree. For those that can or should be considered as errors, there is still the question of when and how these errors should be corrected and explained.

Another point to illustrate the difficulty in teaching discourse structures is that grammaticality has local applications. Whether a sentence is grammatical or ungrammatical is determined by the structure of the immediate sentence. An error can usually be explicitly identified and explained in terms of what is wrong and why. For exactly the same reason, grammatical points can be easily drilled and explained by using simple and short examples that hit right to the point. This, however, is not always true for discourse phenomena such as the use of TCSs. In many cases, the preference of structure A over structure B in discourse cannot be easily explained by rules. Very often, an explanation has to take into consideration quite a few sentences in the context. The longer the discourse context involved, the more complicated the explanation would be, let alone the fact that, at times, more than one structure could be used within the same discourse context with very similar levels of acceptability. What all this amounts to for language instruction is that it is much more difficult to find or construct more than one example to illustrate exactly the same point.

Because of such difficulties in teaching discourse structures, language instruction and the design of textbooks in L2 Chinese usually focus on the structure of individual sentences and the arrangement of elements within a sentence. Instructors also pay much attention to grammatical points and correcting students' grammatical errors. Discourse information and the contextual requirement for certain structures are, to a large extent, left unattended. It is up to individual students to develop the feel or intuition for using the right structure at the right time.

This leads us to the question of whether discourse structures are teachable. If yes, how? I believe the answer to the first half of the question is a positive one. Based on the characteristics of TCSs, some proposals on

teaching methods have already been made. Tsao (1979), for example, suggests that, when teaching Chinese, a paragraph, rather than a sentence, should be regarded as the appropriate working unit. Xie (1992) proposes that "since topic is a discourse notion and it often extends its semantic domain beyond a sentence, it is more appropriate to take a whole topic chain as a working unit in teaching." By taking into consideration both the nature of TCSs and the distinctive characteristics of Chinese, these proposals definitely represent the direction Chinese language instruction should go. Since topic chains and paragraphs involve extended discourse, it has also been proposed that overt instruction of discourse structures may start from the intermediate level.

However, even when using these methods, the difficulty in teaching TCSs specified above still exists. Specifically, many discourse aspects of the Chinese language can hardly be explained by rules. Learners of the language have to somehow develop the intuition to identify which, among all the choices in word order, is the best to express certain meaning within a certain context. In addition, personal experience also shows that students may not be very interested in acquiring structures that are not defined by rules. They may also be reluctant to spend time on something that only makes a difference in degrees of appropriateness. Learners, especially those at beginning stages who are unaware of the importance of the discourse organization of the Chinese language, are always more concerned about the clear-cut rules of right or wrong for individual sentences. This makes one wonder that if we accompany the overt instruction of discourse structures with some kind of covert instruction, e.g., recitation of sample texts, better overall results may be obtained in teaching. I strongly feel that, due to the characteristics of the Chinese language, there is very good rationale for the traditional Chinese recitation method used in language education which has worked well for Chinese L1 acquisition for thousands of years. In L2 acquisition, the adaptation of this traditional method, at least as one of the means to build up intuition, fluency and proficiency, could also work wonders.

The issues concerning whether TCSs should be taught, when they should be taught and how they should be taught are receiving increasing attention in Chinese L2 instruction. It is especially encouraging to see that, in recent years, more and more research is done on TCSs as a language specific feature of Chinese. The acquisition of TCSs has started to be and will continue to be a research interest in L2 Chinese pedagogy. It is hoped that the results of the present study have provided more detailed information on different types of TCSs, their semantic and syntactic characteristics, the different degrees of difficulty they cause, the possible influences from subject-prominent features of English, the developmental route in L2 acquisition by speakers of English and the types of errors occurring in the acquisition process. Although it is still premature to specify the sequence of instruction for TCSs based on one study only, the results of the present study have definitely shown that the acquisition of TCSs is important to the learning of the Chinese language and, therefore, should be an important part of the L2 instruction. The information obtained by the present study about the different degrees of difficulties is crucial in determining the appropriate instruction for learners at different proficiency levels and can be incorperated into the design of teaching materials.

7.6. Summary

In this chapter, a few general issues related to the present study have been discussed. I first compared the subjects' performance for the TCS categories with their proficiency levels. The results showed a consistent progress in the use of TCSs compatible with the subjects' progress in general proficiency. This was taken as evidence for the claim that the acquisition of TCSs is part of the acquisition task of the Chinese language system.

For the generally low scores obtained by the subjects for the TCSs and the large individual differences observed within the proficiency levels, some explanations were sought in the two different aspects of the acquisition of

TCSs, namely, grammaticality and appropriateness. The acquisition of TCSs may take more time because these two aspects are usually acquired separately. Furthermore, the acquisition of appropriateness may be even more difficult than the acquisition of grammaticality because of the marked status of the TCSs compared to the corresponding canonical word order which expresses similar meaning. The degrees of difficulty may also vary according to individual learner's learning environment, learning style and focus of study.

Based on the large variety of TCSs and their semantic and syntactic characteristics identified by the present study, an explanation was also provided for the contradictory claims made concerning the topic-comment stage in L2 acquisition. I suggested that topic-comment is a gradient notion. Different languages or different stages of language acquisition all display the feature of topic-comment, but to different degrees. Specific and accurate criteria are needed for measuring the degrees of topic-prominence of languages. Due to the fact that the analysis of TCSs is an undeveloped area in linguistics, some research questions were proposed for further study.

The section on methodological issues discussed the validity and the reliability of the results of the present study, as well as the advantages of using two experiments with two different types of tasks. I also discussed the psycholinguistic aspects of the experiments in order to account for the differences in the results from the judgment and the translation tasks.

For Chinese language pedagogy, I speculated on the reasons why TCSs have not been a focus of teaching in classroom instruction, pointing out that the teaching of TCSs calls for a systematic analysis of TCSs on the one hand, and an appropriate teaching methodology on the other, but both need to be developed.

CHAPTER EIGHT
Conclusion and Implications

The present study analyzed TCSs in Chinese and observed the L2 acquisition of the 11 TCS categories by learners whose L1 is English.

The analysis of the TCSs has shown that, although topic-comment is a feature observed in all languages, TCSs are not a homogeneous group. They differ in semantic and syntactic characteristics. The analysis has also demonstrated that, although all languages make use of TCSs, different languages may utilize the structures to different degrees. English, for example, is subject-prominent in which TCSs are peripheral phenomena, while Chinese is topic-prominent and more discourse-oriented in which TCSs are basic sentence types. The notion of topic should be a basic notion in the analysis of Chinese sentence structure.

Based on the importance of the notion topic and the large number of TCSs used in Chinese, It was hypothesized that the acquisition of TCSs is an important part in the acquisition of Chinese as an L2, especially for learners whose L1 is not topic-prominent. Moreover, due to the fact that TCSs differ in semantic and syntactic characteristics, different TCSs may cause different degrees of difficulty in learning.

In order to test these hypotheses, a method was developed to classify the TCSs investigated by the present study into 11 categories according to their semantic and syntactic characteristics. Two experiments were carried out to examine the L2 acquisition of the 11 categories of TCSs by learners whose L1 is English. One experiment employed a judgment task to reveal the subjects' abilities to recognize appropriate structures, the other employed a translation task to reveal their ability to produce appropriate structures. Both tasks provided information about the subjects' knowledge of the TCSs and their ability to produce coherent discourse by using them appropriately.

The results from both of the experiments revealed that there are significant differences in the subjects' responses to the 11 TCS categories. This confirms the basic hypotheses of the present study, i.e., there are significant differences in the semantic and syntactic characteristics and these differences cause different degrees of difficulty in learning. In addition, the analysis of the results was also able to identify two factors that play important roles in acquisition, the semantic characteristics of the TCSs and the influence from the learners' L1. More specifically, the TCSs in which the topics are locative and temporal expressions are relatively easier. When topics are semantically related to the agent or the patient in the following clause and receive thematic roles through this relationship, the structures are more difficult. In addition, the sentences that have corresponding structures in the learners' L1 (such as the category C1) are easier to learn; the ones that do not have corresponding structures in learners' L1 (such as C2, D1 and E1) are more difficult.

As a result, category A1 has been singled out as the easiest to learn. This is not only because the semantic structure of A1 is easier, but also because this structure also occurs in the learners' L1. A third reason is that, for English speakers in general, it is easier to put adverbials in sentence-initial position than in the position between the subject NP and the verb as in Chinese canonical word order.

By combining the results from the two experiments, a developmental pattern seems to appear according to which the 11 categories can be divided into 3 groups in terms of difficulty:

a) the easiest: A1

b) medium difficulty: A2, A3, B1, B2, B3 and C1

c) the most difficult: C2, D1, E1 and E2

However, it was also pointed out that, since this is a pioneer study in the field and the first claim ever made on the degrees of difficulty of TCSs, the claim needs to be verified by further studies.

The analysis of the relation between proficiency levels and subjects' performance indicated that the subjects' improvement in their use of TCSs corresponds to the progress in their general proficiency in the language. This confirms the other basic hypothesis, i.e., the acquisition of TCSs is part of the acquisition task for the learners.

The results of the present study also showed that the subjects responded more accurately to the grammaticality than they did to the appropriateness of TCSs. Two major factors may have contributed to the lower scores of appropriateness. One is that appropriateness is more complicated and, thus, more difficult to acquire than grammaticality. The other is that rules of appropriateness are not strictly defined as grammatical rules. They may have more leeway so that some word orders, although inappropriate, are more tolerable than ungrammatical sentences. The context-related nature of appropriateness of word order also gives more possibility for secondary variables such as the concentration on the context in the experiments to play a role. If a learner or a speaker has the knowledge of both the grammaticality and the appropriateness of a structure, the lack of attention on the context is more likely to cause an inappropriate response than an ungrammatical one.

The difficulty in acquiring the appropriateness of TCSs could again be explained by two reasons. One is that the use of TCSs involves not only grammaticality, but also appropriateness in discourse. These two different aspects may not be acquired at the same time. Due to the different focuses of attention at different stages of learning, grammaticality may be acquired earlier. Learners may not even attend to the appropriateness of structures until later stages of learning. The other reason for the difficulty in learning TCSs is that TCSs (if they are different from canonical word order) are usually more "marked" relative to their counterparts in the canonical word order. In acquisition, learners would always learn and internalize the canonical word order first. They may shy away from using marked structures, especially at the early stages in which their confidence level is low.

By combining the results of the error analysis of the two experiments, the acquisition of TCSs can be divided into 3 stages, beginning, intermediate and advanced. The strategies used in production are also different at the 3 stages. At the beginning stage, the learners have very little knowledge of the grammatical rules of Chinese. Therefore, they make use of their L1 knowledge which sometimes results in the use of English word order transfer unacceptable for Chinese. In the intermediate stage, the learners have acquired the canonical word order rules. They have also identified some common features of Chinese and English. Thus, the strategy commonly used at this stage is to make use of the grammatical structures that are acceptable in both L1 and L2 for ease of processing and production. At this stage, the learners may also be aware of the grammaticality of the TCSs, but they may not know how to use the structures in appropriate situations. In the advanced stage, the learners discover the characteristics of discourse organization in Chinese and finally sort out the different contexts for different structures. At this stage they focus more on producing more natural and more coherent discourse.

The results of the empirical study have also indicated that subjects generally perform better in a judgment task than in a production task. Some psychological explanations have been proposed. It was pointed out that, due to the nature of the tasks, there may be fewer steps intervening between the stage of receiving the stimuli and the stage of the decision making for a response in a judgment task. In addition, a judgment task may also require fewer mental resources.

The observation of L1 influence in L2 learning in the present study has revealed some interesting aspects of so-called "positive" and "negative" transfer. First, an instance of L1 transfer could be positive or negative depending on the specific purpose of learning at a specific time. The production of a grammatical sentence due to L1 transfer could be an instance of positive transfer if the target in learning is grammaticality, but an instance of negative transfer if the target in learning is appropriateness. Based on this point, another claim can be made, i.e., negative transfer can

produce two types of utterances, one which is ungrammatical, and another which is grammatical but inappropriate.

The findings of the present study that TCSs are significantly different have also provided some explanation for the contradictory claims made in the field of SLA. It has been pointed out that, since TCSs have different degrees of difficulty, they are expected to be learned at different stages of acquisition. The non-use of some TCSs at a certain stage does not mean the non-existence of the feature of topic-comment. As a result, a gradient notion of topic-prominence and the view of a gradient use of TCSs at different stages of acquisition are advocated.

Since the present study provides a data-based analysis of the acquisition of TCSs, the results have shed some light on the nature of TCSs in Chinese and how they are acquired by speakers whose L1 is English. The study has also identified the aspects of TCSs that cause difficulty in second language acquisition. For the learning process, the study has revealed the different stages the learners go through, the strategies applied and the common errors made in acquisition. These findings provide very useful and important information for effective language instruction. Since English is categorized as a typical subject-prominent language, it is hoped that the findings of this study can be applied to learners whose L1 is not English, but also subject-prominent. In addition, the empirical study of the present research has also shown how the learners' knowledge of English structures influences the acquisition at different stages in different ways.

As an experimental study in SLA, the present research has provided an empirically established sequence of acquisition for TCSs in Chinese by English-speaking learners. Similar studies may be carried out in the future to find out whether learners with other language background follow the same route of acquisition.

Previous studies in typology have shown that linguistic constructions are rendered in different languages differently. Here in this study, we have seen an example of how TCSs which encompass syntactic and discourse

domains, are manifested in Mandarin Chinese. Some of these TCS categories are found in subject-prominent languages such as English, but others may be language specific or characteristics of topic-prominent languages. So far, the only type of TCSs that has been claimed to assume universal status is the one in which topic is also semantically an agent and grammatically the subject of the sentence. But, it seems that temporal, locative and object NPs as topics may also be good candidates for universals. Further cross-linguistic investigations along this line may lead to important generalizations on what types of TCSs are universal and why.

Since linguistics is about the system of language, linguistic investigations always concern the functions of certain units and constructions in this system, or the categories and organizations of constructions. The present inquiry on the categories and organizations of TCSs has demonstrated that semantic and syntactic characteristics can be employed as useful and reliable criteria to subcategorize TCSs, which have been treated so far as an unanalyzed whole in the literature. These subcategories can be exploited as relevant for the description of the language system in general.

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Appendix A
Experimental Stimuli: Translation[52]

Instruction for the Translation Task

Thank you very much for taking part in this experiment. Before you start, please read this section carefully.

This experiment concerns the acquisition of Mandarin Chinese as a second language with a focus on word order. The results of the experiment will contribute to our understanding of the acquisition process and, hopefully, to the improvement of teaching syllabi. The experiment is on a voluntary basis. Its results may appear in a research report, but the participants will remain anonymous. We would like you to put down your initials because we want to compare the performance of the same people in different tasks.

The experiment consists of two tasks, a translation task which is carried out first and a judgement task which will be carried out at a later time. Both of them are pencil-and-paper tasks.

Before you start the translation task, we would like you to fill out an individual information sheet as well as a Cloze test. The former will be helpful in explaining individual differences in learning while the latter will be used to determine your general proficiency level of Mandarin Chinese.

The translation task consists of the translation of 40 target sentences from English into Chinese. Each target sentence will be presented within a context, as shown by Sample A below:

Sample A:

> Some Chinese students are talking about coming to the U.S. to study. Liu said he came in 1987, Wang said he came in 1990. They asked Dong when he came to the states. Dong said, "**I came to the U.S. last year. It'll be one year in August.**"

words for translation:	Meiguo	lai	wo	qunian	(le)
	U.S.	*come*	*I*	*last year*	

Translation:

"_____. **Dao bayue jiu yi-nian le.**"
till August then one year

[52] In the stimuli for both the translation and the judgment tasks, he tones for the Chinese wrods were presented to the subjects for the experiments, but are left out here.

As indicated in Sample A, the **target sentence** for you to translate is underlined, i.e., "I came to the U.S. last year". The Chinese words (in Pinyin) needed for the translation of this sentence have been provided in random order with English gloss underneath. Some words have already been put into phrases. Your task is to arrange these words and phrases in the most appropriate order. Please note that some words are put in brackets (as 'le' in Sample A), while others are not. You are expected to use **all** the words **outside of the brackets** in your translation. The words **in the brackets** can be **optionally** used. Do not use words that are not provided.

Since the translation of any sentence should fit into its context, the **immediate context** of the target sentences, i.e., sentence(s) that occur together with the target sentence within one turn of conversation, has been translated into Chinese and provided with English gloss in the box for translation. For Sample A, the immediate context (shown in bold, but not underlined) occurs after the target sentence, i.e., "It'll be one year in August.". This has been translated into "Dao bayue jiu yi-nian le" and provided with English gloss underneath. Please note that your translation of the underlined target sentences should fit the Chinese context provided.

Here are the steps for you to follow in order to complete each item:

(1) read the context carefully;

(2) read the Chinese words provided for translation and consider possible word orders. For example, for Sample A, the possible word orders are

a. Wo qunian lai Meiguo.
b. Wo qunian lai Meiguo le.
("le" is in bracket and, therefore, optional)
c. Qunian wo lai Meiguo le.
d. Wo lai Meiguo qunian, etc.

(3) Decide which order is the best for the Chinese context provided. (There may be more than one way to express the same meaning. Your task is to find the best.)

(4) write down your translation in Pinyin in the box provided for translation (for Sample A, "Wo qunian lai Meiguo") .

Let's look at another example:

Sample B: Rob: "Have you finished reading my book, Sue?"
Sue: "**I have finished reading your book. It is in my room.**"

Words for translation: kan wo wanle nide shu (le)
read I finished your book

Translation:

" _____. **Zai-wo-wu-li.**
in my room

For Sample B, the target sentence for you to translate is "I have finished reading your book". Your translation has to fit into the Chinese context "Zai-wo-wu-li".

Since this study is on word order, you do not have to consider other things such as the choice of vocabulary, punctuation, whether words should be written separate or together, or whether capital letters should be used. Do not worry about tone marks, either. Just leave them out.

Please keep in mind that this experiment is designed for learners of Mandarin on all levels of proficiency, from the beginning to the most advanced. So, do not feel frustrated if you have no idea about a particular sentence. Take a good guess and go on to the next item.

Now, please fill out the next page of individual information and the Cloze test before you start the translation task. You can tear off the three pages of instruction and put them aside for reference. After you finish the task, the instruction could be thrown away, but the rest should be handed in. We hope you will enjoy the experiment and also learn something from it.

Thank you again.

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Please put your initial here: _____ Now, start the translation task below.

****

(B29) "What took you so long, Jack?."
"**I was looking for my keys in the office. I also made a phone call.**"

Words for translation: zhao wo-de-yaoshi zai-bangongshi wo (le le)
look for my keys in office I

Translation:

"_____. **Hai da-le yi-ge dianhua.**"
also made a phone call

(B39) "Please have some tea. **I've hung your coat at the door. Don't forget it again when you go.**"

Words for translation: zai-menkou gua wo ni-de-waiyi (le le)
at the door hang I your coat

Translation:

_____. **Ni zou de shihou bie you wang-le.**
you go time don't again forget

(A5) Susan works at a housing office. One day she told her supervisor that they were doing very well. "**Ten people moved out this month**," she said, "**but we have twenty applicants to move in.**"

Words for translation: ban-zou zhe-ge-yue shi-ge-ren (zai le)
move away this month ten people

Translation:

"_____. **Keshi you ershi-ge-ren yao ban jinlai.**
but have twenty people want move in

(B35) "**Could you help me to make this phone call?. I have written the phone number here.**"

Words for translation: wo zai-zher dianhua-haoma xie (le)
I here phone number write

Translation:

"**Ni keyi bang wo da zheige dianhua ma?** _____.
you can help me make this phone call

(A22) After the first day of a new term at school, Ricky came back home very excited, "**Some new students came to our class. They are all girls.**"

Words for translation: lai women-ban xin-tongxue yixie (le)
come our class new students some

Translation:

"_____. **dou shi nan-de.**
all are male

(A9) Jean said Jim's room was in a big mess. "**All his clothes are on the floor, two muddy shoes are in bed. <u>There are pictures drawn on the wall</u>. They look ugly and dirty.**"

Words for translation: hua henduo qiang-shang hua (zai ta le)
pictures many wall-on draw

Translation:

"Yifu dou reng zai-di-shang. Chuang-shang you liang-zhi zang xiezi. *cloths all hrow on floor in bed are two dirty shoes* **_____. You zang you nankan.** *both dirty and ugly*

(A6) Coming from China for a visit, Lee's parents told him all the changes in their home town. "**A new airport has been built outside of the city,**" they said, "**<u>Many people in the city have bought private houses</u>. Private cars are getting popular, too.**"

Words for translation: siren-zhuzhai henduo-ren mai cheng-li (zai le)
private houses many people buy city-in

Translation:

"Cheng-wai, jian-le xin feijichang. _____ *city-outside built new airport* **Siren-qiche ye yue-lai-yue-duo.** *private cars also more and more*

(B28) "**Don't wait for me for dinner today. <u>I'll study till 5:00 in the library</u>. Then, I'll go for beer with some friends.**"

Words for translation: dao-wu-dian zai-tushuguan xuexi wo
till 5:00 in library study I

Translation:

"Jintian bie deng wo chi wanfan. _____. *today don't wait me eat supper* **Ranhou he pengyou qu he pijiu.** *then with friends go drink beer*

(A10) Frank peeked into a classroom to see whether it was quite enough to study. "Oh, no." He said to Peter, "**<u>There are many people sitting in this classroom</u>. It's too crowded. Let's go somewhere else.**"

Words for translation: henduo-ren jiaoshi-li zhe-ge zuo (zai le)
many people classroom-in this sit

Translation:

"_____. Tai ji le. Women dao biede *too crowded we to other* **difang qu ba.** *place go*

(A14) Fred told John he was staying with a friend for a few days.
"Don't you have your own house?" John asked. "What happened to it?"
"**I sold it. I've bought a new one, but can't move in until next month.**"

Words for translation: mai fangzi wode (wo le)
sell house my

Translation:

" _____. **Wo you mai-le yi-ge.**
I again bought one
Keshi xia-ge-yue caineng ban-jinqu."
but next month can move in

(B36) "Are you studying medicine here?"
" **Yes. I'll study in this school for three years. Then, I'll go to Japan.**"

Words for translation: xuexi san-nian zai-zheige-xuexiao wo
study three years in this school I

Translation:

" **Shi de.** _____. **Ranhou qu Riben.**
Yes then go Japan

(B38) "**I don't know where she is now. She lived here for two years. Then, she went to Toronto.**"

Words for translation: zai-zher liang-nian zhu ta (le le)
here two years live she

Translation:

"**Wo bu-zhidao ta xianzai zai nar.** _____.
I not know she now be where
Houlai qu-le Duolunduo."
then went Tonronto

(A15) David just graduated from college. He is looking very hard for a job. "**All my male classmates have found jobs.**" he said. "**There are only two female students. They are still looking.**"

Words for translation: zhaodao wode gongzuo nande tongxue dou (le)
found my job male classmate all

Translation:

" _____. **Nu-de zhiyou**
female only have
liang-ge, hai zai zhao."
two still are looking

(A21) Coming back from work in the afternoon, David was told by his wife:
"Two people came in the afternoon.They said they had an appointment with you."

Words for translation: lai xiawu liang-ge-ren (le zai)
come afternoon two people

Translation:

"_____. **Tamen shuo he-ni yue-le."**
They say with you have appointment

(A18) The caretaker said a lot of money had been spent on the suite."**We've bought a new fridge for the kichen, new drapes for the bedrooms and the bathroom. We have put in new carpet for the living room. Now, it looks very good and comfortable.**"

Words for translation: keting huan ditan xin (de women le)
living room change carpet new

Translation:

"**Chufang-de bingxiang shi xin-de, woshi he xishujian de chuanglian ye shi**
kitchen fridge be new bedroom and washroom drapes also be

xinde. _____. **Xianzai, hen piaoliang ye hen shufu.**"
new now very beautiful also very comfortable

(B23) **"My brother started writing when he was fifteen. He has written twelve books so far. Three of them are bestsellers."**

Words for translation: yijing dao-xianzai xie ta shier-ben-shu (le)
already until now write he twelve books

Translation:

"**Wo-gege shiwu-sui kaishi xiezuo.** _____.
my brother 15 years old start writing

San-ben shi changxiaoshu.
three are bestseller

(A3) After a busy day, Mr. Liu got back to his office. His secretary told him, "**I came to work at 8:30 in the morning. I received three letters at 9:00. All of them are from the US.**"

Words for translation: san-feng-xin jiu-dian shoudao (zai wo le)
three letters 9:00 receive

Translation:

"**Wo shangwu ba-dian lai shangban.** _____.
I morning 8:00 came work

Doushi cong meiguo lai de.
all from America come

(A8) Lisa's sister became the principal of a high school two years ago. Yesterday she told Lisa proudly, "**We have a lot more students now. <u>We also built a new classroom building in the school this year</u>. It looks very good.**"

Words for translation: gai-le xuexiao-li hai jinnian xin-jiaoxue-lou (zai women)
built school-in also his year new classroom-building

Translation:

" Women xuexiao xianzai-de xuesheng duo duo le . *our school now students increase a lot* **_____. piaoliang ji le.** *beautiful extremely*

(B26) "**I heard he is coming back on Thursday. <u>I won't go to see him until Friday</u>. He will certainly be home then.**"

Words for translation: kan-ta zai-qu wo dao-singqi-wu (le)
see him then go I until Friday

Translation:

"Wo tingshuo ta singqi-si huilai. _____. *I hear he Thursday come back* **Ta na-shihou kending zaijia.** *he then certainly be home*

(A2) Debby told her new friend that she is new to the city and hasn't bought a house yet. "**I have been staying in an apartment and making lots of phone calls.**" She said."**<u>I looked at three houses last week</u>. I don't like any of them.**"

Words for translation: san-ge-fangzi wo kan shang-xingqi (le)
three houses I look last week

Translation:

"Wo zhu zai-gongyu-li . Wo da-le henduo dianhua. *I live in an apartment I made many phone calls* **_____. wo dou bu xihuan.** *I all not like*

(A20) Mary told her friends that her house has just been renovated. "**The basement has been finished, the livingroom has been expanded. <u>We have put in new curtains for my bedroom</u>. We also put a big TV in there.**"

Words for translation: xin huan chuanglian woshi wode (wo le)
new change curtain bedroom my

Translation:

"Dixiashi xiuhao-le. Keting kuoda-le. _____. *basement finished livingroom expanded* **hai fang-le yi-ge da dianshi."** *also put a big TV*

(B30) "Where is Anna? There is a phone call for her."
"**She is washing clothes downstairs. I'll go to get her.**"

Words for translation: zai-lou-xia ta yifu xi (le)
downstairs she clothes wash

Translation:

"_____. **Wo qu jiao ta.**"
I go get she

(A17) A salesman at a used auto dealer is comparing two cars for a customer. "**This car has some rust spots. But it runs very well. The price is good, too. We have fixed the engine of that car. We put in a lot of work. Therefore, the price is higher.**"

Words for translation: xiu fadongji women na-bu-che (le de)
fix engine we that car

Translation:

"**Zhe-bu che you xiudian, keshi yunxing lianghao, jiaqian ye pianyi.**
this car has rust spots but run well price also inexpensive

_____, **hua-le henduo rengong.**
put in a lot of work

suoyi jiaqian gui yidian.
therefore price expensive a little

(A4) Chris came to work in the morning and saw an anouncement on the board. It reads: "**We will have two meetings this morning. One is at 8:00; the other is at 10:30.**"

Words for translation: liang-ge-hui jintian kai shangwu (zai women)
two meetings today have morning

Translation:

_____. **Yi-ge zai**
one at

ba-dian. Ling-yi-ge zai shi-dian-ban.
8:00 the other at 10:30

(B25) "**Sorry, I have to go now. I'll come back very late. I will not be able to call you until 9:00 pm.**"

Words for translation: gei-ni-da-dianhua keneng wo caineng dao-wanshang-jiudian
call you maybe I be able to until 9:00pm

Translation:

"**Duibuqi Wo yao zou-le, hen-wan cai-neng huilai.**
I'm sorry. I have to go very late can return

_____.

(B40) "**Do not bring in the food. Eating is not allowed in the library.**"

Words for translation: chi dongxi bu-xu tushuguan-li (zai ni)
eat things not allow library -in

Translation:

"**Bie dai chi-de jin-qu.** _____."
do not bring food in there

(A16) Tony wants to start a business. he said," "**Most of my friends are doing business. They earn a lot of money.**"

Words for translation: zuo-shengyi duoban wode dou pengyou (zai le)
do business most my all friend

Translation:

"_____. **Zhuan henduo qian.**"
earn a lot of money

(A11) Gary looked everywhere for the two letters he wrote. Then his wife said, "**I have already mailed those two letters. Don't you remember?**"

Words for translation: ji-le yijing na-liang-feng-xin wo (le)
mailed already those two letters I

Translation

"_____. **Ni wangji-le ma?**"
you forgot

(A19) "**All the articles in this book have been edited. I have changed the titles of some of the articles. Some articles have been shortened. I also wrote a preface.**"

Words for translation: wenzhang huan youxie timu wo (le de)
article change some title I

Translation:

"**Zhe-ben-shu de wenzhang dou bianji-guo le.** _____.
this book articles all edited

Youxie wenzhang suoduan-le. Wo hai xie-le yi-ge qianyan."
some articles shortened I also wrote a preface

(B37) "**Ben has worked here for three months. We all like him very much.**"

Words for translation: san-ge-yue gongzuo zai-zher Ben (le le)
three months work here

Translation:

" _____. **Women dou hen xihuan ta.**"
we all very like he

(B24) "**I'll have lived here for three years until October. I moved into this building as soon as I arrived in China.** "

Words for translation: dao-jinnian-shiyue san-nian zai-zher wo zhu (le le jiu)
until October this year hree years here I live

Translation:

_____. "**Wo yi dao** *I soon arrive* **Zhongguo jiu ban dao zher zhu le.** " *China then move to here live*

(A7) "**Mrs. Thompson is a very popular teacher. She teaches music in an elementary school. Many people outside of the school also know her.**"

Words for translation: renshi-ta xiao-wai henduo-ren ye (le)
know her school outside many people also

Translation:

"**Thompson taitai shi yi-ge hen shou-huanying-de laoshi. Ta zai yi-ge** *Mrs. Thompson is a very popular teacher she in an* **xiaoxue jiao yinyue.** _____. *elementary school teach music*

(B32) "Have you heard that Bill is in hospital?"
"Yes. **He lives alone at home. He suddenly fell on the floor this morning. Maybe it is heart trouble.**"

Words for translation: dao turan zai-di-shang ta jintian-shangwu (le le)
fall suddenly on the floor he this morning

Translation:

"**Ta yi-ge-ren zhu zai-jia-li.** _____. *he one person live at home* **Yexu shi xinzangbing.** *maybe be heart trouble*

(A12) "There are two cups of tea here. May I drink either one?"
"**I'm sorry. You may drink that one. I have taken a sip from this one already.**"

Words for translation: yijing zhei-bei-cha he-guo wo (le)
already this cup of tea drink I

Translation:

"**Duibuqi. Ni keyi he nei-bei.** _____." *I'm sorry. you may drink that cup*

(B27) "Why do you always make such terrible noise. I can't do anything."
"**Don't worry. I live here only till August. Then you will be alone.**"

Words for translation: dao-ba-yue wo zhu zhi zai-zher (le)
till August I live only here

Translation:

"**Bie zhaoji.** _____. **Yihou ni jiu ziji zhu le.**
do not worry after you then self live

(B31) "Did you see Tracy?"
"**I saw her when I came in. She was standing at the door. She may be gone by now.**"

Words for translation: zai-menkou zhan ta (zhe le)
at the door stand she

Translation:

"**Wo jinlai de shihou kanjian ta.** _____. **Xianzai keneng zou-le.**
I come-in time see her now probably gone

(B33) "Danny, where did you park your car?"
"**I parked my car outside of the library. There is no parking space here.**"

Words for translation: wo-de-che zai-tushuguan-waibian ting (wo le le)
my car outside of the library park

Translation:

"_____. **Zher meiyou difang ting.**
here not have space park

(A1) "**I got this job four years ago and started saving money right away. I bought a new car last week. I like it very much.**"

Words for translation: mai xin-qiche wo shang-xingqi yi-liang (le zai)
buy new car I last week a

Translation:

"**Wo si-nian yiqian zhaodao zhe-ge gongzuo, mashang kaishi cunqian.**
I four years ago got this job immediately start save money
_____. **Wo hen xihuan.**"
I very like

(A13) It was a cold day. Bob hurried to school for his French class. A friend asked why he was not wearing a jacket. He said. "**I washed it. It is still wet.**"

Words for translation: xi waiyi wode (wo le)
wash jacket my

Translation:

"_____. **Hai shi shi-de.**"
still is wet

(B34) " **May I use your book? I left mine at home**."

Words for translation: wang wo-de-shu zai-jia-li (wo le le)
forget *my book* *at home*

Translation:

"**Wo keyi yong yixia ni-de shu ma**? _____.
I may use a while your book

You have accomplished the task!!!

Please put down your initial again: _____
And then, hand this in. Thank you very much.

Appendix B
Experimental Stimuli: Judgment

Instruction for the Judgement Task

Thank you very much for taking part in this experiment. Before you start, please read this section carefully.

This experiment concerns the acquisition of Mandarin Chinese as a second language with a focus on word order. The results of the experiment will contribute to our understanding of the acquisition process and, hopefully, to the improvement of the teaching syllabus. The experiment is on a voluntary basis. Its results may appear in a research report, but the participants will remain anonymous. We would like you to put down your initials because we want to compare the performance of the same people in different tasks.

In the judgment task, we invite you to make judgments on some Chinese sentences produced by other learners. The entire task consists of 40 items. In each item, a conversational situation will be presented to you in English first. This conversation was carried out in Mandarin Chinese. One sentence within this conversation had been said differently by different people. Your task now is to tell us whether these sentences are good or not. Now, let's look at some examples:

Sample A:

> Some Chinese students are talking about coming to the U.S. to study. Liu said he came in 1987, Wang said he came in 1990. They asked Dong when he came to the states. Dong said, "**I came to the U.S. last year. It'll be one year in August.**"

Chinese Context:

"_____.	**Dao**	**bayue**	**jiu**	**yi-nian**	**le**."
	till	*August*	*then*	*one year*	

(1) Qunian wo lai Meiguo le.	3	2	1	0
last year I come the U.S.				
(2) Wo lai Meiguo qunian.	3	2	1	0
(3) Wo qunian lai Meiguo.	3	2	1	0
(4) Wo qunian lai Meiguo le.	3	2	1	0

As indicated in Sample A, the **target sentence** is underlined, i.e. "I came to the U.S. last year". It has been translated into Chinese in four different ways shown by (1)-(4). The target sentence occurs in context. The immediate context (i.e., sentence(s) that appear together with a target sentence within one turn of conversation) is shown in bold (i.e., "It'll be one year in August") and also provided in Chinese in the box for "**Chinese context**" with English gloss underneath (i.e., "Dao bayue jiu yi-nian le"). The blank in

the box shows the position of the target sentence. Your task is to decide whether (1)-(4) are good for the Chinese context and, then, indicate your judgment by circling one of the numbers after each sentence. The criteria for the judgments are:

3 - both grammatical and appropriate for the context (i.e. the best among the four);
2 - grammatical but inappropriate for the context (illustrated later);
1 - good sentence structure, but has minor grammatical errors;
0 - ungrammatical.

In order to make sure that you know all the vocabulary used, the English gloss has been provided under (1) in italics. (2)-(4) are rearrangements of the same words.

For Sample A, (1) is grammatical. It could be a good sentence in other context. But somehow, it does not fit the context here. Therefore, it is marked as a "2". (2) is ungrammatical because "qunian" ('last year') cannot be put at the end of the sentence. Therefore, it is a "0". (3) is the best, both grammatical and appropriate for the context. So it is a "3". (4) is similar to (1), also a "2". Please note that for each item, there is one and only one best choice for the context, i.e., only one "3", but you can use the other numbers more than once (for example, in Sample A, "2" is used twice).

As you can see from Sample A, the four sentences for each item that you are going to make judgments on could be very similar. You have to read them carefully with the context in order to distinguish among them. Here are the steps for you to follow in order to complete each item:

(1) read the conversational situation and the Chinese context carefully;

(2) put the sentence you are making judgment on into the position of the blank, read it through together with the Chinese context and see whether it is good or not;

(3) make a judgment according to the criteria and circle the corresponding number.

Sample B: Rob: "Have you finished reading my book, Sue?"
Sue: "**I have finished reading your book. It is in my room.**"
Chinese Context:

" _____. **Zai-wo-wu-li.**" *in my room*

(1) Wo kan wan ni-de shu le. *I read finish your book*	3	2	1	0
(2) Wo kan wan ni-de shu.	3	2	1	0
(3) Wo wan le kan ni-de shu.	3	2	1	0
(4) Ni-de shu wo kan wan le.	3	2	1	0

For Sample B, the English meaning of the target sentence is "I have finished reading your book". The Chinese version of this sentence should fit into the Chinese context "Zai-wo-wu-li" ('It is in my room'). (1) and (2) are grammatical, but are not the best for this particular context. Therefore, they are both "2". (3) is ungrammatical; (4) is the best, both grammatical and appropriate for the context.

Please keep in mind that this study is on word order. You do not have to consider other things such as the choice of vocabulary, punctuation, whether words are written separate or together, or whether tones are correct. You should also remember that this experiment is designed for people on all levels of proficiency, from the beginning to the most advanced. So, if you are not sure about a particular sentence, just take a good guess and go on to the next item.

Now, you can tear off the three pages of instruction and put them aside for reference. After you finish the task, the instruction could be thrown away, but the rest should be handed in.

Thank you again.

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Please put your initial here: _____ Now, start the task.

****

(B38) **"I don't know where she is now. She lived here for two years. Then, she went to Toronto."**

Chinese Context:

"Wo bu-zhidao ta xianzai zai nar. *I not know she now be where*	_____.
Houlai qu-le Duolunduo." *then went Tonronto*	

(1)	Ta zai-zher zhu-le liang-nian. *she here lived two years*	3	2	1	0
(2)	Zai-zher ta zhu-le liang-nian.	3	2	1	0
(3)	Liang-nian ta zai-zher zhu-le.	3	2	1	0
(4)	Ta zhu-le zai-zher liang-nian.	3	2	1	0

(B36) "Are you studying medicine here?"
"Yes. I'll study in this school for three years. Then, I'll go to Japan."

Chinese Context:

"Shi de. *Yes*	_____.	**Ranhou** *then*	**qu** *go*	**Riben.** *Japan*

(1)	Wo zai-zheige-xuexiao xuexi san-nian. *I at this school study three years*	3	2	1	0
(2)	Zai-zheige-xuexiao wo xuexi san-nian.	3	2	1	0
(3)	San-nian wo zai-zheige-xuexiao xuexi.	3	2	1	0
(4)	Wo xuexi zai-zheige-xuexiao san-nian.	3	2	1	0

(A1) **"I got this job four years ago and started saving money right away. I bought a new car last week. I like it very much."**

Chinese Context:

"Wo si-nian yiqian zhaodao zhege gongzuo, mashang kaishi cunqian. *I four years ago got this job immediately start save money*				
_____.	**Wo** *I*	**hen** *very*	**xihuan."** *like*	

(1)	Wo mai-le yi-liang xin-qiche shang-xingqi. *I bought a new car last week*	3	2	1	0
(2)	Shang-xingqi wo mai-le yi-liang xin-qiche.	3	2	1	0
(3)	Wo shang-xingqi mai-le yi-liang xin-qiche.	3	2	1	0
(4)	Yi-liang xin-qiche wo shang-xingqi mai-le.	3	2	1	0

(B39) "Please have some tea. **I've hung your coat at the door. Don't forget it again when you go.**"

Chinese Context:

"_____. **Ni zou de shihou bie you wang-le.**
you go time don't again forget

(1)	Ni-de-waiyi wo gua zai-menkou le. *your coat I hang at the door*	3	2	1	0
(2)	Wo gua ni-de-waiyi zai-menkou le.	3	2	1	0
(3)	Wo gua-le ni-de-waiyi zai-menkou.	3	2	1	0
(4)	Zai-menkou wo gua ni-de-waiyi le.	3	2	1	0

(A6) Lee's parents came from China to visit him recently. They told him all the changes in their home town. "**A new airport has been built outside of the city,**" they said, "**Many people in the city have bought private houses. Private cars are getting popular, too.**"

Chinese Context:

"**Cheng-wai, jian-le xin feijichang.** _____.
city-outside built new airport

Siren qiche ye yue-lai yue-duo.
private cars also more and more

(1)	Cheng-li, henduo-ren mai-le siren-zhuzhai. *city-in many people bought private cars*	3	2	1	0
(2)	Henduo-ren cheng-li mai-le siren-zhuzhai.	3	2	1	0
(3)	Henduo-ren zai cheng-li mai-le siren-zhuzhai.	3	2	1	0
(4)	Henduo-ren mai-le siren-zhuzhai zai cheng-li.	3	2	1	0

(B28) "**Don't wait for me for dinner today. I'll study till 5:00 in the library. Then, I'll go for beer with some friends.**"

Chinese Context:

"**Jintian bie deng wo chi wanfan.** _____.
today don't wait me eat supper

Ranhou he pengyou qu he pijiu.
then with firend go drink beer

(1)	Wo dao-wu-dian zai-tushuguan xuexi. *I til 5:00 in the library study*	3	2	1	0
(2)	Wo zai-tushuguan xuexi dao-wu-dian.	3	2	1	0
(3)	Zai-tushuguan wo xuexi dao-wu-dian.	3	2	1	0
(4)	Dao-wu-dian wo zai-tushuguan xuexi.	3	2	1	0

(A10) Frank peeked into a classroom to see whether it was quite enough to study. "Oh, no." He said to Peter, "**<u>There are many people sitting in this classroom</u>. It's too crowded. Let's go somewhere else.**"

Chinese Context:

_____. Tai	**ji**	**le. Women**	**dao**	**biede**		**difang**	**qu**	**ba.**
too crowded		*we*	*to*	*other*		*place*	*go*	

(1)	Zhe-ge-jiaoshi-li henduo ren zuo.	3	2	1	0
	in this classroom many people sit				
(2)	Zhe-ge-jiaoshi-li zuo-le henduo ren.	3	2	1	0
(3)	Henduo ren zuo zai zhe-ge-jiaoshi-li.	3	2	1	0
(4)	Henduo ren zai zhe-ge-jiaoshi-li zuo-zhe.	3	2	1	0

(B33) "Danny, where did you park your car?"
"**<u>I parked my car outside of the library</u>. There is no parking space here.**"

Chinese Context:

"_____.		**Zher**	**meiyou**		**difang**		**ting.**	
		here	*not have*		*space*		*park*	

(1)	Wo ting wo-de-che zai-tushuguan-waibian.	3	2	1	0
	I park my car outside of the library				
(2)	Wo zai-tushuguan-waibian ting wo-de-che.	3	2	1	0
(3)	Wo-de-che ting zai-tushuguan-waibian.	3	2	1	0
(4)	Wo-de-che zai-tushuguan-waibian ting le.	3	2	1	0

(A9) Jean said Jim's room was in a big mess. "**All his clothes are on the floor, two muddy shoes are laying in the bed. <u>There are pictures drawn on the wall</u>. They look ugly and dirty.**"

Chinese Context:

"Yifu	**dou**	**reng**	**zai-di-shang.**	**Chuang-shang**	**you**	**liang-zhi**		**zang**	**xiezi.**	
cloths	*all*	*hrow*	*floor-on*	*bed-on*	*are*	*two*		*dirty*	*shoes*	
_____.						**You-zang-you-chou.**				
						both dirty and ugly				

(1)	Ta zai-qiang-shang hua-le henduo hua.	3	2	1	0
	he on the wall drew many pictures				
(2)	Qiang-shang hua-le henduo hua.	3	2	1	0
(3)	Ta hua-le henduo hua zai-qiang-shang .	3	2	1	0
(4)	Henduo hua hua zai-qiang-shang.	3	2	1	0

(B34) " **May I use your book? I left mine at home.**"
Chinese Context:

"Wo keyi yong yixia ni-de shu ma? _____.
I may use a while your book

(1)	Wo zai-jia-li wang-le wo-de shu. *I at home forgot my book*	3	2	1	0
(2)	Wo wang-le wo-de shu zai-jia-li.	3	2	1	0
(3)	Wo-de shu wo zai-jia-li wang-le.	3	2	1	0
(4)	Wo-de shu wang zai-jia-li le.	3	2	1	0

(A7) "**Mrs. Thompson is a very popular teacher. She teaches music in an elementary school. Many people outside of the school also know her.**"
Chinese Context:

"Thompson taitai shi ge hen shou-huanying-de laoshi. Ta zai yi-ge
Mrs. is a very popular teacher she in an
xiaoxue jiao yinyue. _____.
elementary each music

(1)	xiao-wai henduo-ren ye renshi ta. *school outside many people also know her*	3	2	1	0
(2)	Ta xiao-wai henduo-ren ye renshi.	3	2	1	0
(3)	Henduo-ren zai xiao-wai ye renshi ta.	3	2	1	0
(4)	Henduo-ren ye renshi ta zai xiao-wai.	3	2	1	0

(B23) "**My brother started writing when he was fifteen. He has written twelve books so far. Three of them are bestsellers.**"
Chinese Context:

"Wo-gege shiwu-sui kaishi xiezuo. _____.
my brother 15 years old start writing
San-ben shi changxiaoshu.
three are bestseller

(1)	Ta dao-xianzai yijing xie-le shier-ben-shu. *he till now already wrote 12 books*	3	2	1	0
(2)	Dao-xianzai ta yijing xie-le shier-ben-shu.	3	2	1	0
(3)	Ta xie-le shier-ben-shu dao-xianzai yijing.	3	2	1	0
(4)	Dao-xianzai ta xie-le shier-ben-shu yijing.	3	2	1	0

(A4) Chris came to work in the morning and saw an anouncement on the board: " **We will have two meetings this morning. One is at 8:00; the other is at 10:30.**"

Chinese Context:

"_____. **Yi-ge at ba-dian. Ling yi-ge zai shidian-ban.**
one at 8:00 other one at 10:30

(1) Jintian shangwu kai liang-ge hui.	3	2	1	0
today morning have two meeting				
(2) Women jintian shangwu kai liang-ge hui.	3	2	1	0
(3) Women kai liang-ge hui jintian shangwu.	3	2	1	0
(4) Liang-ge hui women jintian shangwu kai.	3	2	1	0

(A8) Lisa's friend is the principal of an elementary school. "**We have a lot more students now.**" She told Lisa proudly, "**We also built a new classroom building in the school this year. It looks very good.**"

Chinese Context:

"**Women xuexiao xianzai-de xuesheng duo duo le .**
our school now students more a lot

_____. **piaoliang ji le.**
beautiful extremely

(1) Women hai gai-le jiaoxue-lou zai-xuexiao-li jinnian.	3	2	1	0
we also built classroom building in the school this year				
(2) Women jinnian hai zai-xuexiao-li gai-le jiaoxue-lou.	3	2	1	0
(3) Jiaoxue-lou xuexiao-li jinnian hai gai-le.	3	2	1	0
(4) Xuexiao-li jinnian hai gai-le jiaoxue-lou.	3	2	1	0

(B35) "**Could you help me to make this phone call?. I have written the phone number here.**"

Chinese Context:

"**Ni keyi bang wo da zheige dianhua ma?** _____.
you can help me make this phone call

(1) Wo zai-zher xie-le dianhua-haoma.	3	2	1	0
I here write phone number				
(2) Wo xie dianhua-haoma zai-zher le.	3	2	1	0
(3) Wo dianhua-haoma xie zai-zher le.	3	2	1	0
(4) Dianhua-haoma wo xie zai-zher le.	3	2	1	0

(A17) In a used auto dealer, a salesman is comparing two cars for a potential buyer. **"This car has some rust spots. But it runs very well. The price is good, too. <u>We have fixed the engine of that car</u>. We put in a lot of work. Therefore, the price is higher."**

Chinese Context:

"Zhe-bu che you xiudian, keshi yunxing lianghao, jiaqian ye pianyi.
this car has rust spots but run well price also inexpensive

_____, hua-le henduo rengong, suoyi jiaqian gui yidian.
put in a lot of work therefore price high a little

(1)	Na-bu-che xiu-le fadongji. *that car fixed engine*	3	2	1	0
(2)	Na-bu-che de fadongji xiu-le.	3	2	1	0
(3)	Na-bu-che women xiu-le fadongji .	3	2	1	0
(4)	Women xiu-le na-bu-che de fadongji.	3	2	1	0

(A5) Susan works at a housing office. She is telling her supervisor that they are doing very well. **"<u>Ten people moved out this month</u>, but we have twenty applicants to move in."**

Chinese Context:

"_____. Keshi you ershi-ge ren yao ban jinlai.
but have twenty people want move in

(1)	Zhe-ge yue shi-ge ren ban chuqu . *this month ten people move out*	3	2	1	0
(2)	Shi-ge ren zhe-ge yue ban chuqu le.	3	2	1	0
(3)	Zhe-ge yue ban chuqu le shi-ge ren.	3	2	1	0
(4)	Shi-ge ren ban chuqu le zhe-ge yue.	3	2	1	0

(B26) **"I heard he is coming back on Thursday. <u>I won't go to see him until Friday</u>. He will certainly be home then."**

Chinese Context:

"Wo tingshuo ta singqi-si huilai. _____.
I hear he Thursday come back

Ta na-shihou kending zaijia.
he then certainly be home

(1)	Wo qu kan ta dao-singqi-wu. *I go see he till Friday*	3	2	1	0
(2)	Wo bu qu kan ta dao-singqi-wu.	3	2	1	0
(3)	Wo zai qu kan ta dao-singqi-wu .	3	2	1	0
(4)	Wo dao-singqi-wu zai qu kan ta.	3	2	1	0

(A14) Fred told John he was staying with a friend for a few days.
"Don't you have your own house?" John asked. "What happened to it?"
"**I sold it**." said Fred, "**I've bought a new one, but can't move in till next month.**"

Chinese Context:

" _____. **Wo you mai-le yi-ge. Keshi xia-ge-yue caineng**
I again bought one but next month can
ban jinqu.
move in

(1)	Wo mai-le wo-de fangzi.	3	2	1	0
	I sold my house				
(2)	Wo mai-le wo-de fangzi le.	3	2	1	0
(3)	Wo-de fangzi wo mai-le.	3	2	1	0
(4)	Wo-de fangzi mai-le.	3	2	1	0

(A20) Mary told her friends that her house has just been renovated."**The basement has been finished, the living-room has been expanded. We have changed curtains for my bedroom. We also put a big TV in there.**"

Chinese Context:

"Dixiashi xiuhao-le. Keting kuoda-le. _____.
basement finished livingroom expanded
hai fang-le yi-ge da dianshi."
also put a big TV

(1)	Women huan-le wo-de woshi de chuanglian.	3	2	1	0
	we changed my bedroom curtain				
(2)	Wo-de woshi de chuanglian huan-le.	3	2	1	0
(3)	Wo-de woshi women huan-le chuanglian.	3	2	1	0
(4)	Wo-de woshi huan-le chuanglian.	3	2	1	0

(B31) "Did you see Tracy?"
"**I saw her when I came in. She was standing at the door. She may be gone by now.**"

Chinese Context:

"Wo jinlai de shihou kanjian ta. _____. Xianzai keneng zou-le.
I come-in time see her now probably gone

(1)	Ta zhan zai-menkou.	3	2	1	0
	she stand at the door				
(2)	Ta zai-menkou zhan.	3	2	1	0
(3)	Zai-menkou ta zhan le.	3	2	1	0
(4)	Zai-menkou ta zhan zhe.	3	2	1	0

(A3) After a busy day, Mr. Liu got back to his office. His secretary told him, "**I came to work at 8:30 in the morning. <u>I received three letters at 9:00</u>. All are from the US.**"

Chinese Context:

"Wo	**shangwu**	**badian**	**lai**	**shangban.**	_____.
I	*morning*	*8:00*	*came*	*work*	
Doushi	**cong**	**meiguo**	**lai**	**de.**	
all	*from*	*America*	*come*		

(1)	Wo jiudian shoudao san-feng xin.	3	2	1	0
	I 9:00 receive three letters				
(2)	Jiudian shoudao san-feng xin.	3	2	1	0
(3)	Wo shoudao san-feng xin jiudian.	3	2	1	0
(4)	Jiudian wo shoudao san-feng xin.	3	2	1	0

(B29) "What took you so long, Jack?."
"**<u>I was looking for my keys in the office</u>. I also made a phone call.**"

Chinese Context:

"_____.	**Hai**	**da-le**	**yi-ge**	**dianhua."**	
	also	*made*	*a*	*phone call*	

(1)	Zai-bangongshi wo zhao wo-de-yaoshi.	3	2	1	0
	in the office I look for my keys				
(2)	Wo zhao wo-de-yaoshi zai-bangongshi.	3	2	1	0
(3)	Wo zai-bangongshi zhao wo-de-yaoshi.	3	2	1	0
(4)	Wo-de-yaoshi wo zai-bangongshi zhao	3	2	1	0

(A19) "**All the articles in this book have been edited. <u>I've changed the titles of someof the articles</u>. Some articles have been shortened. I also wrote a preface.**"

Chinese Context:

"Zhe-ben-shu	**shuoyou-de**	**wenzhang**	**dou**	**bianji-guo**	**le.**	_____		
this book	*all*	*articles*	*all*	*edited*				
_____.	**Youxie**	**wenzhang**	**suoduan-le.**	**Wo**	**hai**	**xie-le**	**yi-ge**	**qianyan.**
	some	*articles*	*shortened*	*I*	*also*	*wrote*	*a*	*preface*

(1)	Youxie wenzhang huan-le timu.	3	2	1	0
	some articles changed title				
(2)	Youxie wenzhang wo huan-le timu.	3	2	1	0
(3)	Wo huan-le youxie wenzhang de timu.	3	2	1	0
(4)	Youxie wenzhang de timu wo huan-le.	3	2	1	0

(A16) Tony wants to start a business. he said, "**<u>Most of my friends are doing business</u>. They earn a lot of money.**"

Chinese Context:

"_____. **Zhuan henduo qian."**
earn a lot of money

(1)	Wo-de duoban pengyou douzai zuo-shengyi.	3	2	1	0
	my most friends are doing business				
(2)	Wo-de pengyou duoban douzai zuo-shengyi.	3	2	1	0
(3)	Duoban wo-de pengyou douzai zuo-shengyi.	3	2	1	0
(4)	Zuo-shengyi wo-de pengyou duoban douzai.	3	2	1	0

(B32) "Have you heard that Bill is in hospital?"
"Yes. **He lives alone at home. <u>He suddenly fell on the floor this morning</u>. Maybe it is heart trouble.**"

Chinese Context:

"Ta yi-ge-ren zhu zai-jia-li. _____. Yexu shi xinzangbing.
he one person live at home probablly be heart trouble

(1)	Ta turan zai-di-shang dao jintian-shangwu.	3	2	1	0
	he suddenly on floor fall this morning				
(2)	Jintian-shangwu ta turan dao zai-di-shang.	3	2	1	0
(3)	Jintian-shangwu ta turan zai-di-shang dao.	3	2	1	0
(4)	Ta jintian-shangwu turan zai-di-shang dao.	3	2	1	0

(A21) Coming back from work in the afternoon, David was told by his wife:
"**<u>Two people came in the afternoon</u>.They said they had an appointment with you."**

Chinese Context:

"_____. **Tamen shuo he-ni yue-le."**
they say with you have appointment

(1)	Liang-ge ren xiawu lai-le.	3	2	1	0
	two people afternoon came				
(2)	Liang-ge ren zai xiawu lai-le.	3	2	1	0
(3)	Liang-ge ren lai-le zai xiawu.	3	2	1	0
(4)	Xiawu lai-le liang-ge ren.	3	2	1	0

(A18) The caretaker said a lot of money had been spent on the suite. "**We've bought a new fridge for the kichen, new drapes for the bedrooms and the bathroom. <u>We have put in new carpet for the living room</u>. Now, it looks very good and comfortable.**"

Chinese Context:

"**Chufang-de bingxiang shi xin-de, woshi he xishujian de chuanglian ye** *kitchen fridge is new bedroon and washroom drapes also* **shi xin de._____. Xianzai, hen piaoliang** *be new now very beautiful* **ye hen shufu.**" *also very comfortable*

(1) Women huan-le keting de ditan. *we changed living-room carpet*	3	2	1	0
(2) Keting women huan-le ditan.	3	2	1	0
(3) Keting de ditan women huan le.	3	2	1	0
(4) Keting huan-le ditan.	3	2	1	0

(B24) "**<u>I'll have lived here for three years until October</u>. I moved into this building as soon as I arrived in China.** "

Chinese Context:

"_____. "**Wo yi dao Zhongguo jiu ban dao zher zhu le.**" *I soon arrive China then move to here live*

(1) Dao-shiyue wo zai-zher jiu zhu-le san-nian le. *till October I here then live three years*	3	2	1	0
(2) Wo dao-shiyue zai-zher jiu zhu-le san-nian le.	3	2	1	0
(3) Wo zhu-le san-nian dao-shiyue zai-zher.	3	2	1	0
(4) Wo zhu-le san-nian dao-shiyue zai-zher.	3	2	1	0

(A2) Debby said she is new to the city and hasn't bought a house yet. "**I have been staying in an apartment and making lots of phone calls. <u>I looked at three houses last week</u>. But I don't like any of them.**"

Chinese Context:

"**Wo zhu zai-gongyu-li. Wo da-le henduo dianhua.** _____. *I live in apartment I made many phone calls* **Wo dou bu xihuan.** *I all not like*

(1) Wo shang-xingqi mkan-le sange fangzi. *I last week look at three houses*	3	2	1	0
(2) Shang-xingqi wo kan-le san-ge fangzi.	3	2	1	0
(3) Wo kan-le san-ge fangzi shang-xingqi.	3	2	1	0
(4) San-ge fangzi wo shang-xingqi kan-le.	3	2	1	0

(B25) "**Sorry, I have to go now. I'll come back very late. <u>I will not be able to call you until 9:00 pm.</u>**"

Chinese Context:

"**Duibuqi. Wo yao zou-le, hen-wan cai-neng huilai.** _____."
I'm sorry. I have to go very late can come back

(1)	Wo caineng gei-ni-da-dianhua dao-wanshang-jiudian.	3	2	1	0
	I be able to call you till 9:00pm				
(2)	Wo dao-wanshang-jiudian gei-ni-da-dianhua.	3	2	1	0
(3)	Wo dao-wanshang-jiudian caineng gei-ni-da-dianhua.	3	2	1	0
(4)	Wo caineng gei-ni-da-dianhua dao-wanshang-jiudian.	3	2	1	0

(A12) "There are two cups of tea here. May I drink either one?"
"**I'm sorry. You may drink that one. <u>I have taken a sip from this one already</u>.**"

Chinese Context:

"**Duibuqi. Ni keyi he nei-bei.** _____."
I'm sorry. you may drink that cup

(1)	Zhe-bei cha wo yijing he-guo le.	3	2	1	0
	this cup tea I already drank				
(2)	Zhe-bei cha wo he-guo le yijing.	3	2	1	0
(3)	Wo yijing he-guo le zhe-bei cha.	3	2	1	0
(4)	Wo he-guo le zhe-bei cha yijing.	3	2	1	0

(A22) After the first day of a new term at school, Ricky came back home very excited, "**<u>Some new students came to our class</u>. They are all girls.**" he said.

Chinese Context:

"_____. **dou** *all* **shi** *are* **nan-de.** *male*

(1)	Yixie xin tongxue lai-le women-ban.	3	2	1	0
	some new students came our class				
(2)	Yixie xin tongxue lai women-ban le.	3	2	1	0
(3)	Women-ban lai-le yixie xin tongxue.	3	2	1	0
(4)	Yixie xin tongxue women-ban lai-le.	3	2	1	0

(B37) "**<u>Ben has worked here for three months</u>. We all like him very much.**"

Chinese Context:

" _____. **Women dou hen xihuan ta."** *we all very like he*

(1)	San-ge-yue Ben zai-zher gongzuo le.	3	2	1	0
	three months here work				
(2)	Zai-zher Ben gongzuo-le san-ge-yue le.	3	2	1	0
(3)	Ben gongzuo zai-zher san-ge-yue le.	3	2	1	0
(4)	Ben zai-zher gongzuo san-ge-yue le.	3	2	1	0

(A13) It was a cold day. Bob hurried to school for his French class. A friend of him asked why he was not wearing a jacket. He said. "**I washed it. It is still wet.**"

Chinese Context:

_____.	**Hai**	**shi**	**shi-de.**
	still	*is*	*wet*

(1) Wo xi-le wo-de waiyi le.	3	2	1	0
I washed my jacket				
(2) Wo xi-le wo-de waiyi.	3	2	1	0
(3) Wo-de waiyi wo xi-le.	3	2	1	0
(4) Wo-de waiyi xi-le.	3	2	1	0

(B27) "Why do you always make such terrible noise. I can't do anything."
"**Don't worry. I live here only till August. Then you will be alone.**"

Chinese Context:

"**Bie zhaoji.** _____.	**Yihou**	**ni**	**jiu**	**ziji**	**zhu le.**
do not worry	*after*	*you*	*then*	*self*	*live*

(1) Dao-ba-yue wo zhi zai-zher zhu.	3	2	1	0
till August I only here live				
(2) Wo dao-ba-yue zhi zai-zher zhu.	3	2	1	0
(3) Wo zhi zai-zher dao-ba-yue zhu.	3	2	1	0
(4) Wo zhi zai-zher zhu dao-ba-yue.	3	2	1	0

(A11) Gary looked everywhere for the two letters he had written. Then his wife said, "**I have already mailed those two letters. Don't you remember?**"

Chinese Context

_____.	**Ni**	**wangji**	**le ma ?**
	you	*forgot*	

(1) Wo ji-le na-liang-feng-xin yijing.	3	2	1	0
I mailed those two letters already				
(2) Na-liang-feng-xin wo ji-le yijing.	3	2	1	0
(3) Na-liang-feng-xin wo yijing ji-le.	3	2	1	0
(4) wo yijing ji-le na-liang-feng-xin.	3	2	1	0

(B30) "Where is Anna? There is a phone call for her."
"**She is washing clothes downstairs. I'll go to get her.**"

Chinese Context:

"_____.	**Wo**	**qu**	**jiao**	**ta."**
	I	*go*	*get*	*she*

(1) Yifu ta zai-lou-xia xi.	3	2	1	0
clothes she downtairs wash				
(2) Ta xi yifu zai-lou-xia.	3	2	1	0
(3) Ta zai-lou-xia xi yifu.	3	2	1	0
(4) Zai-lou-xia ta xi yifu.	3	2	1	0

(A15) After graduation, David was looking very hard for a job. "**All my male classmates have found jobs**." he said. "**There are only two female students. They are still looking.**"

Chinese Context:

"_____.	**Nude zhi you liang-ge.**	**Hai zai zhao.**
	female only have wo	*still are looking*

(1)	Gongzuo wo-de nande tongxue dou zhaodao le. *job my male classmates all found*	3	2	1	0
(2)	Wo-de tongxue nande dou zhaodao gongzuo le.	3	2	1	0
(3)	Wo-de nande tongxue dou zhaodao gongzuo le.	3	2	1	0
(4)	Wo-de nande tongxue dou zhaodao le gongzuo.	3	2	1	0

(B40) "**Do not bring in any food. Eating is not allowed in the library.**"

Chinese Context:

"**Bie dai chi-de jin-qu.** _____."
do not bring food in there

(1)	Chi dongxi bu-xu zai-tushuguan-li. eat things not allowed in the library	3	2	1	0
(2)	Tushuguan-li bu-xu chi dongxi.	3	2	1	0
(3)	Bu-xu chi dongxi zai-tushuguan-li.	3	2	1	0
(4)	Chi dongxi zai-tushuguan-li bu-xu.	3	2	1	0

****

Please put down your initial again:

_____

You have accomplished this task!!!
Thank you very much.